

INDEX

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INDEX (CONTINUED)

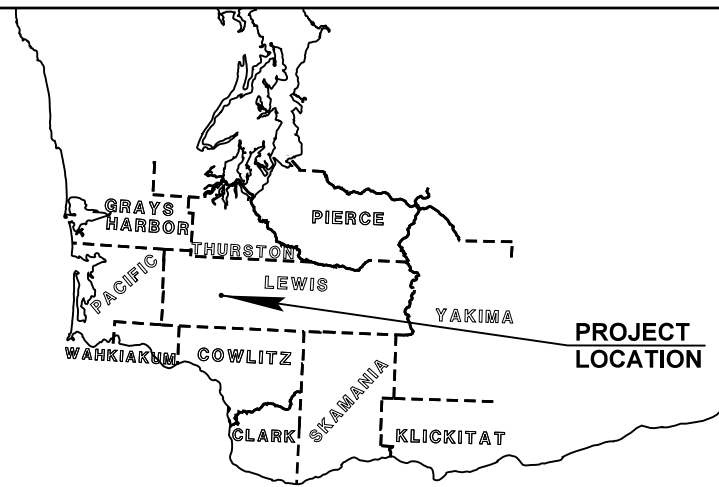
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	PLAN
	REFERENCE
	NO.
	SHEET
	OF
	SHEETS

NOTE: ALL SHEET REFERENCES, FIRST NOS. OF STRUCTURE CODE DESIGNATIONS AND MATCH LINE SHEET REFERENCES, ETC., THROUGHOUT THE PLANS, REFER TO THE ENTRY IN THE PLAN REFERENCE NUMBER BOX.

<div style="border-bottom: 1px solid black; width: 100px; margin: 0 auto;"></div> <div style="display: flex; justify-content: space-between; width: 100%;"> P.E. STAMP BOX DATE </div>	<div style="border-bottom: 1px solid black; width: 100px; margin: 0 auto;"></div> <div style="display: flex; justify-content: space-between; width: 100%;"> P.E. STAMP BOX DATE </div>	<div style="text-align: center;">  <p>Washington State Department of Transportation</p> </div>	<div style="text-align: center;"> <p>I-5</p> <p>KOONTZ ROAD BRIDGE</p> <p>EMERGENCY BRIDGE REPAIR</p> </div>	<div style="text-align: center;"> <p>PLAN REF. NO.</p> <p>IN1</p> </div>
			<div style="text-align: center;"> <p>INDEX</p> </div>	<div style="text-align: center;"> <p>SHEET</p> <p>1</p> <p>OF</p> <p>37</p> <p>SHEETS</p> </div>

SEC. 1, T.12N., R.2W. AND
SEC. 36, T.13N., R.2W., WM
LEWIS COUNTY



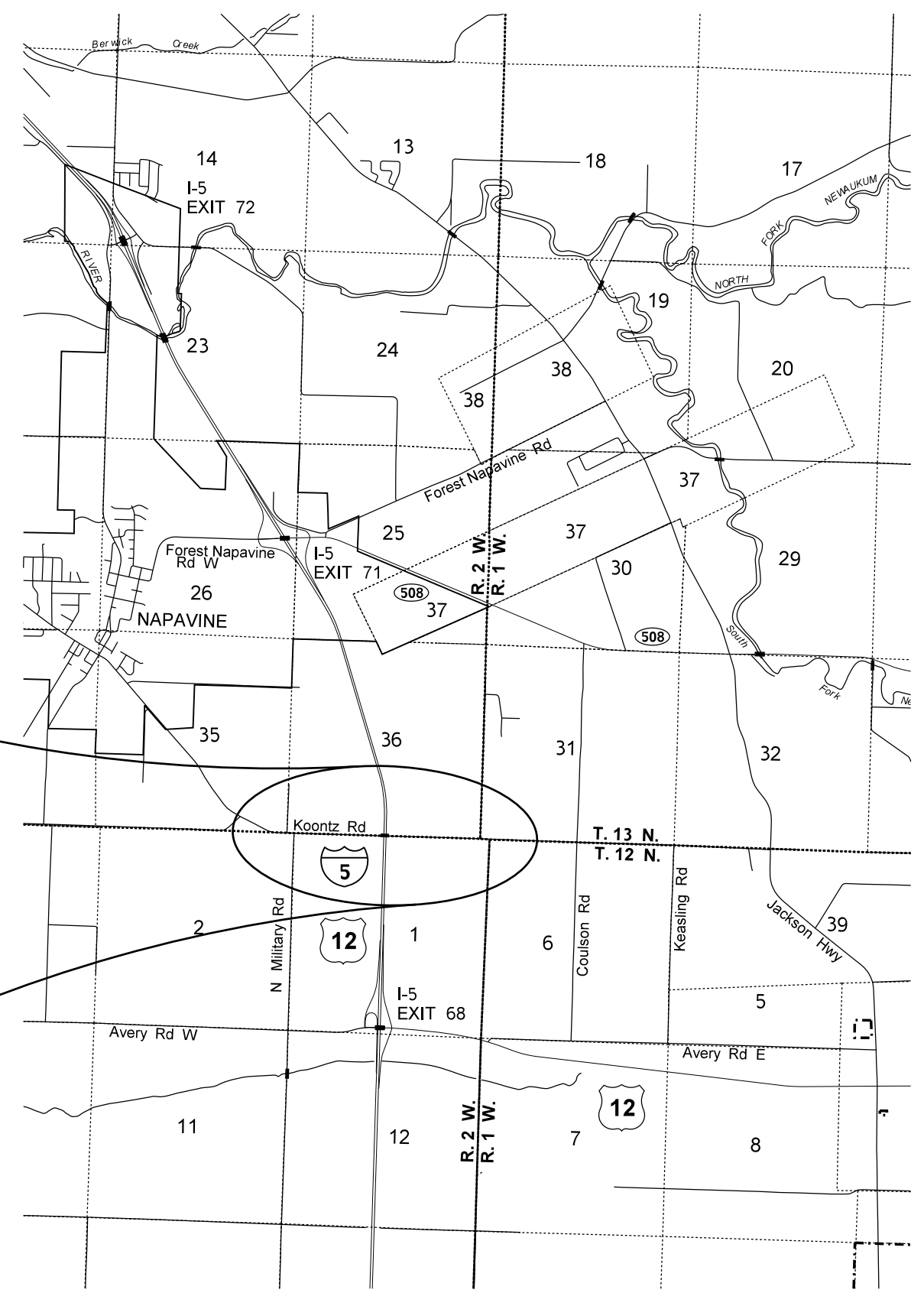
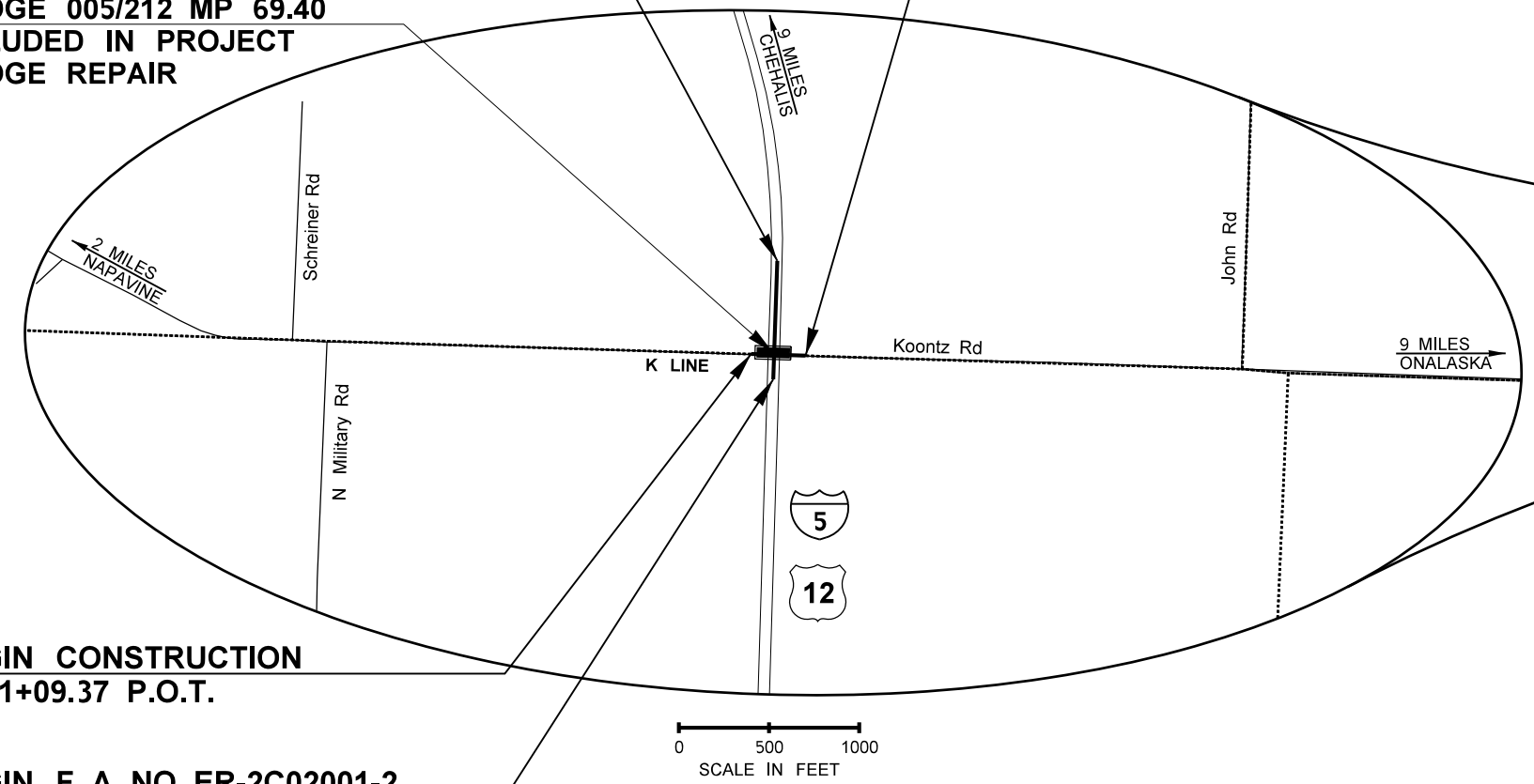
END F. A. NO. ER-2C02001-2
END PROJECT
I-5 MP 69.48
L 1207+54.30 P.O.T.

END CONSTRUCTION
K 13+68.06 P.O.T.

BRIDGE 005/212 MP 69.40
INCLUDED IN PROJECT
BRIDGE REPAIR



BEGIN CONSTRUCTION
K 11+09.37 P.O.T.

BEGIN F. A. NO. ER-2C02001-2
BEGIN PROJECT
I-5 MP 69.35
L 1201+20.70 P.O.T.



FILE NAME G:\444307\03-Design\Design\I-5\I-5 Koontz Road bridge repair\18 CAD\XL6514_PS_VM.dgn										REGION NO.		STATE		FED.AID PROJ.NO. ER-2C02001-2		<div><div></div><div>Washington State Department of Transportation</div></div>		I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR		Plot 1	
TIME 9:00:50 AM								10		WASH		PLAN REF NO VM1									
DATE 11/22/2022								JOB NUMBER 22X344						SHEET 2 OF 37 SHEETS							
PLOTTED BY geistr								CONTRACT NO.		LOCATION NO.						<div><div></div><div>VICINITY MAP</div></div>					
DESIGNED BY R. GEIST																					
ENTERED BY R. GEIST																					
CHECKED BY CHEHALIS AEO																					
PROJ. ENGR. P. MASON																					
REGIONAL ADM. C. FRANCIS																					
REVISION										DATE		BY				DATE					
																P.E. STAMP BOX					
																		P.E. STAMP BOX			


PROJECT LICENSED PROFESSIONAL CERTIFICATES

 <p>Paul Mason</p> <p>Dec 22, 2022</p> <p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>	 <p>Scott Langer</p> <p>Dec 21, 2022</p> <p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>	 <p>Harvey L. Coffman</p> <p>Dec 21, 2022</p> <p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>	
<p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>	<p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>	<p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>	<p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>
<p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>	<p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>	<p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>	<p>AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.</p>

NOTES:

THIS PLAN SET WAS DEVELOPED ELECTRONICALLY UNDER THE DIRECT SUPERVISION
OF THE LICENSED PROFESSIONALS THAT HAVE AFFIXED THEIR SIGNATURE TO THIS PAGE.

THIS SHEET SERVES AS THE CERTIFICATION BY THE ABOVE LICENSED PROFESSIONALS
OF ALL SHEETS IN THIS PLAN SET WHERE THEIR STAMPS AND SIGNATURES APPEAR.

FILE NAME G:\444307\03-Design\Design\I-5\I-5 Koontz Road bridge repair\18 CAD\XL6514_PS_CT.dgn										Plot 1									
TIME 8:36:57 AM				REGION NO.		STATE		FED.AID PROJ.NO. ER-2C02001-2										PLAN REF NO	
DATE 11/22/2022				10		WASH												CT1	
PLOTTED BY geistr				JOB NUMBER				LOCATION NO.										SHEET 3 OF 37 SHEETS	
DESIGNED BY R. GEIST				22X344															
ENTERED BY R. GEIST				CONTRACT NO.				 <p>Washington State Department of Transportation</p>										CERTIFICATION SHEET	
CHECKED BY K. ECKLUND																			
PROJ. ENGR. P. MASON								<div> <div>DATE</div> <div>P.E. STAMP BOX</div> </div> <div> <div>DATE</div> <div>P.E. STAMP BOX</div> </div>											
REGIONAL ADM. C. FRANCIS																			
		REVISION		DATE		BY													

SUMMARY OF QUANTITIES

DOT_RGG900

12/12/2022

ITEM NO	TOTAL QUANTITY	SUB-TOTAL * SECTION I-07.2(1) OF STANDARD SPECS	SUB-TOTAL ** SECTION I-07.2(2) OF STANDARD SPECS	STD. ITEM NO.	UNIT	ITEM	GROUP 1 I-5 MP 69.35 TO MP 69.48	GROUP 2 THIRD PARTY DAMAGES													
						PREPARATION															
1	LUMP SUM		LUMP SUM	0001	L.S.	MOBILIZATION	L.S.														
2	LUMP SUM		LUMP SUM	0061	L.S.	REMOVING PORTION OF EXISTING BRIDGE NO. 5/212	L.S.														
3	249.00		249.00	0145	L.F.	REMOVING CONC. BARRIER	249.00														
4	21.00		21.00	0190	L.F.	REMOVING PLASTIC LINE	21.00														
						STRUCTURE															
5	16.00		16.00	4006	C.Y.	STRUCTURE EXCAVATION CLASS A INCL. HAUL	16.00														
6	LUMP SUM		LUMP SUM	4013	L.S.	SHORING OR EXTRA EXCAVATION CL. A BRIDGE NO. 5/212	L.S.														
7	81.00		81.00	4269	L.F.	PRESTRESSED CONC. GIRDER W50G	81.00														
8	-1.00		-1.00	4219	DOL	DEFICIENT STRENGTH CONC. PRICE ADJUSTMENT	-1.00														
9	LUMP SUM		LUMP SUM	4300	L.S.	SUPERSTRUCTURE - BRIDGE NO. 5/212 REPAIR	L.S.														
10	87.00		87.00	4415	L.F.	TRAFFIC BARRIER	87.00														
						SURFACING															
11	6.00		6.00	5100	TON	CRUSHED SURFACING BASE COURSE	6.00														
						HOT MIX ASPHALT															
12	2.10		2.10	5738	TON	HMA FOR PAVEMENT REPAIR CL. 3/8 IN. PG 58H-22	2.10														
13	-1.00		-1.00	5830	DOL	JOB MIX COMPLIANCE PRICE ADJUSTMENT	-1.00														
14	5.00		5.00	5837	DOL	ASPHALT COST PRICE ADJUSTMENT	5.00														
						EROSION CONTROL AND ROADSIDE PLANTING															
15	12.00		12.00	6403	DAY	ESC LEAD	12.00														
16	4.00		4.00	6471	EACH	INLET PROTECTION	4.00														
17	LUMP SUM		LUMP SUM	6488	L.S.	EROSION CONTROL AND WATER POLLUTION PREVENTION	L.S.														
						TRAFFIC															
18	50.00		50.00	6781	L.F.	TEMPORARY BARRIER	50.00														
19	7500.00		7500.00	7450	DOL	REPAIR TRANSPORTABLE ATTENUATOR	7,500.00														
20	100.00		100.00	6806	L.F.	PAINT LINE	100.00														
21	LUMP SUM		LUMP SUM	6890	L.S.	PERMANENT SIGNING	L.S.														
22	LUMP SUM		LUMP SUM	6971	L.S.	PROJECT TEMPORARY TRAFFIC CONTROL	L.S.														
23	25000.00		25000.00	7572	DOL	WORK ZONE SAFETY CONTINGENCY	25,000.00														
24	381.00		381.00	6982	S.F.	CONSTRUCTION SIGNS CLASS A	381.00														
25	1.00		1.00	6975	DOL	WSP REIMBURSEMENT	1.00														
						OTHER ITEMS															
26	12.00		12.00	7015	C.Y.	CONTROLLED DENSITY FILL	12.00														
27	LUMP SUM		LUMP SUM	7037	L.S.	STRUCTURE SURVEYING	L.S.														
28	140.00		140.00		L.F.	TEMPORARY CHAIN LINK FENCE	140.00														
29	5000.00		5000.00	7715	DOL	FORCE ACCOUNT ROAD REPAIRS	5,000.00														
30	5.00		5.00	7725	DOL	REIMBURSEMENT FOR THIRD PARTY DAMAGE		5.00													
31	-1.00		-1.00	7728	DOL	MINOR CHANGE	-1.00														
32	-1.00		-1.00	7732	DOL	AGGREGATE COMPLIANCE PRICE ADJUSTMENT	-1.00														
33	LUMP SUM		LUMP SUM	7736	L.S.	SPCC PLAN	L.S.														

GROUP LEGEND

GROUP NUMBER1

SR005

CONTROL SECTION210100

TAX SCHEDULE**

FUND PARTICIPANTSSTATE,FEDERAL

			REGION	STATE	FEDERAL AID PROJECT. NO.																
			10	WA	ER-2C02001-2																
			JOB NUMBER																		
			22X344/5																		
			CONTRACT NO																		
DATE			000000																		
			BY																		

Washington State
Department of Transportation

I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR

SUMMARY OF QUANTITIES

SQ1

SHEET
4
OF
37
SHEETS

QUANTITIES THIS SHEET

- 1

K 11+09.37 (0.00' RT TO 11.35' RT) - 11 LF - REMOVING PLASTIC LINE
- 2

K 11+15.75 (12.50' RT) - 1 EACH - INLET PROTECTION
- 3

K 11+15.75 (12.50' LT) - 1 EACH - INLET PROTECTION
- 4

K 11+85.00 (10.00' RT) TO K 13+65.00 (15.00' RT) - 249 LF - REMOVING CONC. BARRIER
- 5

K 11+94.00 (14.00' RT) TO K 12+94.00 (14.00' RT) - 140 LF - TEMPORARY CHAIN LINK FENCE
- 6

K 12+84.25 (12.50' RT) - 1 EACH - INLET PROTECTION
- 7

K 12+84.25 (12.50' LT) - 1 EACH - INLET PROTECTION
- 8

K 13+68.06 (0.00' LT TO 10.40' LT) - 10 LF - REMOVING PLASTIC LINE

BEGIN
CONSTRUCTION
K 11+09.37 P.O.T.

END CONSTRUCTION
K 13+68.06 P.O.T.

ANGLE POINT
K 11+94.00 (6.00' LT)
BEGIN TEMPORARY
CHAIN LINK FENCE
K 11+94.00 (14.00' RT)

L 1203+84.70 =
K 12+00

N01°44'47"E
L LINE

S88°15'13"E
K LINE

KOONTZ RD

BEGIN REMOVING
CONC. BARRIER

REMOVING
PLASTIC LINE

ANGLE POINT
K 12+94.00 (6.00' LT)

REMOVING
PLASTIC LINE

END TEMPORARY
CHAIN LINK FENCE
K 12+94.00 (14.00' RT)

END REMOVING
CONC. BARRIER

LEGEND

- CONSTRUCTION ALIGNMENT NEW
- DOUBLE CENTERLINE EXISTING
- EDGE LINE EXISTING
- GUARDRAIL EXISTING
- SKIP CENTERLINE EXISTING
- WIDE LANE LINE EXISTING
- BRIDGE EXPANSION JOINT EXISTING
- BRIDGE DECK LIMITS
- CONCRETE TRAFFIC BARRIER EXISTING
- TEMPORARY CONCRETE BARRIER EXISTING
- GRATE INLET EXISTING
- TEMPORARY CHAIN LINK FENCE

0 10 20
SCALE IN FEET

NOTES:
SEE SPECIAL PROVISION 8-12.3
TEMPORARY CHAIN LINK FENCE.

FILE NAME		G:\444307\03-Design\Design\I-5\I-5 Koontz Road bridge repair\18 CAD\XL6514_PS_AL SP.dgn									
TIME	12:41:26 PM						REGION NO.	STATE	FED.AID PROJ.NO. ER-2C02001-2		
DATE	12/15/2022						10	WASH			
PLOTTED BY	geistr						JOB NUMBER 22X344		LOCATION NO.		
DESIGNED BY	K. ECKLUND						CONTRACT NO.				
ENTERED BY	R. GEIST										
CHECKED BY	T. GREEN										
PROJ. ENGR.	P. MASON										
REGIONAL ADM.	C. FRANCIS										
		REVISION				DATE	BY				



SEE SHEET CT1
DATE

P.E. STAMP BOX



I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
ALIGNMENT AND SITE PREP PLAN

Plot 1

PLAN REF NO
SP1

SHEET
5
OF
37
SHEETS

SIGN INSTALLATION SPECIFICATIONS



SIGN NO.	SIGN CODE	SIGN DESCRIPTION	STA. LOC. (or MP)	SIGN SIZE		SHEETING TYPE	LETTER SIZE OR CODE	POST MATERIAL	POST SIZE	POST LENGTH				CLEARANCE		REMARKS
				X	Y					H1	H2	H3	H4	V	W	
1	E7-1	Chehalis 9, Olympia 36, Seattle 96	69.48	144"	84"	III or IV	STANDARD	STEEL	W8X21	16	18					

SIGN RELOCATION SPECIFICATIONS

SIGN NO.	SIGN CODE	SIGN DESCRIPTION	EXIST. STA. LOC. (or MP)	NEW STA. LOC. (or MP)	SIGN SIZE		POST MATERIAL	POST SIZE	POST LENGTH				CLEARANCE		REMARKS
					X	Y			H1	H2	H3	H4	V	W	
1	D3-301	Koontz Rd	69.39	69.39	60"	12"	BR MOUNT	OVERHEAD							MOUNT TO BRIDGE COLUMN. SIGN SHALL BE MOUNTED TO THE BRIDGE USING RESIN BONDED ANCHORS. SEE SPECIAL PROVISION 2-02.3(2) FOR REMOVAL DETAILS.

CONSTRUCTION NOTES:
POST LENGTHS SHOWN ARE APPROXIMATE. FINAL VALUES SHALL BE DETERMINED IN THE FIELD PRIOR TO FABRICATION.
FOR STRUCTURE AND MOUNTING DETAILS SEE STANDARD PLAN SHEET SERIES "G".
FOR CODE REFERENCES AND STANDARD DETAILS SEE WASHINGTON STATE SIGN FABRICATION MANUAL.
CONTRACTOR SHALL STORE AND PROTECT RELOCATED SIGN FROM DAMAGE. ANY SIGN LOST, STOLEN OR DAMAGED SIGN SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
ALL W8X21 POST SHALL BE MOUNTED ON TYPE TP-B SUPPORTS PER G-24.60
FOR CLEARANCES VALUES V AND W NOT STATED IN THE PLANS REFER TO STANDARD PLAN G-20.10.
CONTRACTOR SHALL MOVE SIGN(S) AHEAD OR BACK ON STATION TO AVOID SIGN OBSTRUCTIONS.
PRECAST BASES ARE NOT PERMITTED.



FILE NAME G:\Traffic\TRAFFIC DESIGN\01-ACTIVE DESIGN FILES\XL6514 I-5 Koontz Rd Bridge Repair\Sheet\XL6514_PS_SN.dgn										FED.AID PROJ.NO. ER-2C02001-2			SEE SHEET CT1 DATE	P.E. STAMP BOX	DATE	 Washington State Department of Transportation	I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR SIGN INSTALLATION & RELOCATION SPECIFICATIONS	Plot 1
TIME 3:34:51 PM				REGION NO. 10	STATE WASH	PLAN REF NO SN1												
DATE 12/15/2022																		
PLOTTED BY wachtek																		
DESIGNED BY K. WACHTER																		
ENTERED BY K. WACHTER																		
CHECKED BY D. BURKEY/ R. SMITH																		
PROJ. ENGR. S. LANGER																		
REGIONAL ADM. C. FRANCIS																		
REVISION		DATE		BY	JOB NUMBER 22X344		CONTRACT NO.		LOCATION NO.		P.E. STAMP BOX		DATE		SHEET 7 OF 37 SHEETS			












SIGN REMOVAL SPECIFICATIONS	
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SIGN NO.	SIGN CODE	SIGN DESCRIPTION	STA. LOC. (or MP)	SIGN SIZE		POST MATERIAL	POST SIZE	# OF POSTS	REMARKS
				X	Y				
1	W20-901	TRAFFIC REVISION AHEAD	K MP 1.76	48"	48"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
2	R2-1	SPEED LIMIT 40	K MP 1.79	30"	36"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
3	W3-5	SPEED LIMIT 25 ADVISORY	K MP 1.82	48"	48"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
4	R2-1	SPEED LIMIT 25	K MP 1.89	30"	36"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
5	W20-4	ONE LANE ROAD AHEAD	K MP 1.93	48"	48"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
6	W3-1A	STOP AHEAD	K MP 1.96	48"	48"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
7	R1-1	STOP STOP STOP STOP	K MP 2.00	36"	36"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
8	R1-2A	WAIT FOR ONCOMING TRAFFIC	K MP 2.00	24"	18"				MOUNTED BELOW SIGN 7. SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
9	W12-401R	LATERAL CLEARANCE MARKER	K MP 2.01	12"	36"	SADDLE BARRIER			SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
10	W12-401L	LATERAL CLEARANCE MARKER	K MP 2.03	12"	36"	SADDLE BARRIER			SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
11	E7-1	Chehalis 9, Olympia 36, Seattle 96	I-5 MP 69.39	156" 48"	84"	BRG MOUNT			SEE SPECIAL PROVISIONS 2-02.3(2)
12	W1-4R	REVERSE CURVE RIGHT	K MP 2.03	48"	48"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
13	R1-1	STOP STOP STOP STOP	K MP 2.04	36"	36"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
14	R1-2A	WAIT FOR ONCOMING TRAFFIC	K MP 2.04	24"	18"				SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
15	W3-1A	STOP AHEAD	K MP 2.08	48"	48"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
16	R2-1	SPEED LIMIT 40	K MP 2.10	30"	36"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
17	W20-4	ONE LANE ROAD AHEAD	K MP 2.11	48"	48"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
18	R2-1	SPEED LIMIT 25	K MP 2.15	30"	36"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
19	W3-5	SPEED LIMIT 25 ADVISORY	K MP 2.21	48"	48"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.
20	W20-901	TRAFFIC REVISION AHEAD	K MP 2.28	48"	48"	STEEL		1	SIGN, POST AND MOUNT TO REMAIN PROPERTY OF WSDOT, SEE SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS.

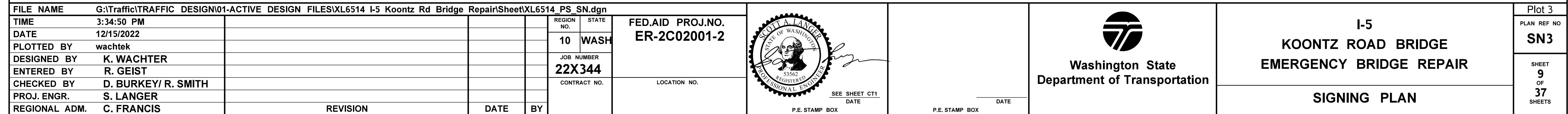
CONSTRUCTION NOTES:

OVERHEAD SIGN AND/OR STRUCTURE. ALL SIGNS, BRACING, HARDWARE AND OTHER MISC. ATTACHED ITEMS SHALL BE DISPOSED OF BY THE CONTRACTOR. CONTRACTOR SHALL STORE AND PROTECT ALL SIGNS STATED TO REMAIN PROPERTY OF WSDOT. SEE CONTRACT SPECIAL PROVISION "SIGN REMOVAL" FOR ADDITIONAL DETAILS. ANY PRESERVED SIGN(S) LOST, STOLEN OR DAMAGED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

LEGEND

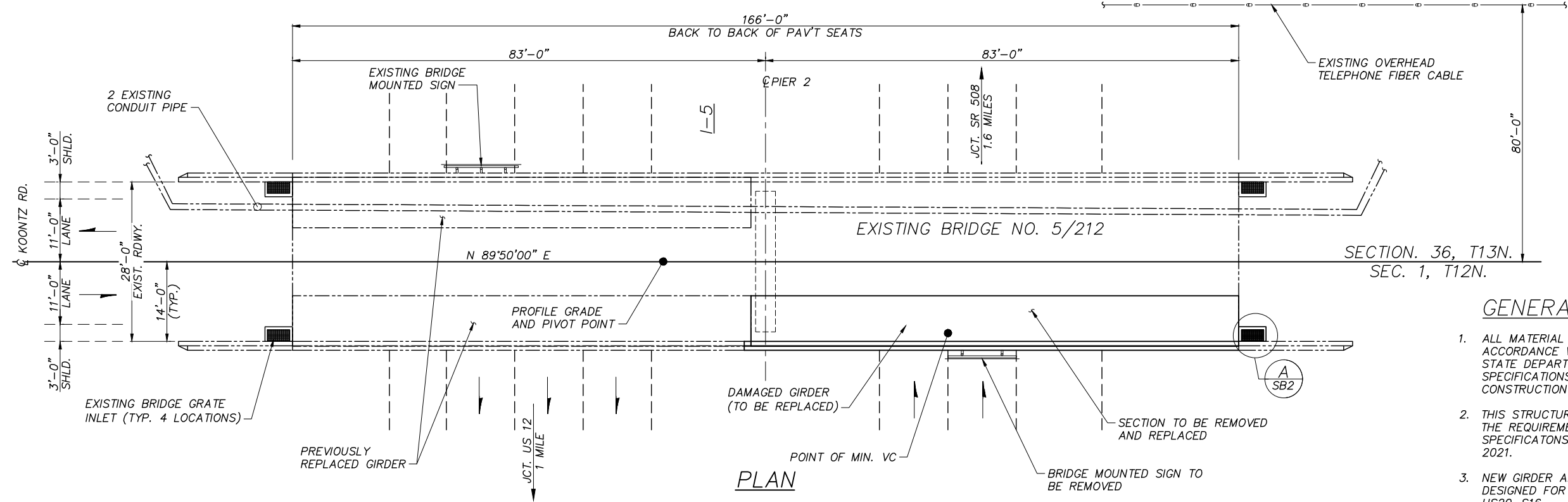
	SIGN REMOVAL NUMBER		EXISTING SIGN DOUBLE POST		GRATE INLET EXISTING
	SIGN INSTALLATION NUMBER		EXISTING OVERHEAD SIGN		EXISTING TRAFFIC CONCRETE BARRIER
	SIGN RELOCATION NUMBER	-----	EXISTING EDGE OF PAVEMENT	-- --	EXISTING CENTERLINE SKIP
	NEW SIGN SINGLE POST	— — — —	EXISTING EDGE PAINT LINE		
	NEW SIGN DOUBLE POST	- - - - - -	EXISTING GUARDRAIL		
	NEW OVERHEAD SIGN	== == == ==	EXISTING DOUBLE YELLOW CENTERLINE		
	BRIDGE MOUNTED SIGN	-----	EXISTING BRIDGE		

FILE NAME G:\Traffic\TRAFFIC DESIGN\01-ACTIVE DESIGN FILES\XL6514 I-5 Koontz Rd Bridge Repair\Sheet\XL6514_PS_SN.dgn										<div><div>SEE SHEET CT1 DATE _____</div><div>P.E. STAMP BOX _____</div></div>	<div>DATE _____</div> <div>P.E. STAMP BOX _____</div>	<div><div>Washington State Department of Transportation</div></div>	<div>I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR</div>	Plot 2
TIME 3:34:42 PM				REGION NO.	STATE	FED.AID PROJ.NO. ER-2C02001-2	PLAN REF NO SN2							
DATE 12/15/2022				10	WASH									
PLOTTED BY wachtek				JOB NUMBER 22X344										
DESIGNED BY K. WACHTER				CONTRACT NO.		LOCATION NO.		SHEET 8						
ENTERED BY K. WACHTER								OF 37						
CHECKED BY D. BURKEY/ R. SMITH								SHEETS						
PROJ. ENGR. S. LANGER									SIGN REMOVAL SPECIFICATIONS					
REGIONAL ADM. C. FRANCIS		REVISION	DATE	BY										



SEC. 1 & 36, T. 12N. & 13N., R. 2W., W.M.
LEWIS COUNTY

I-5



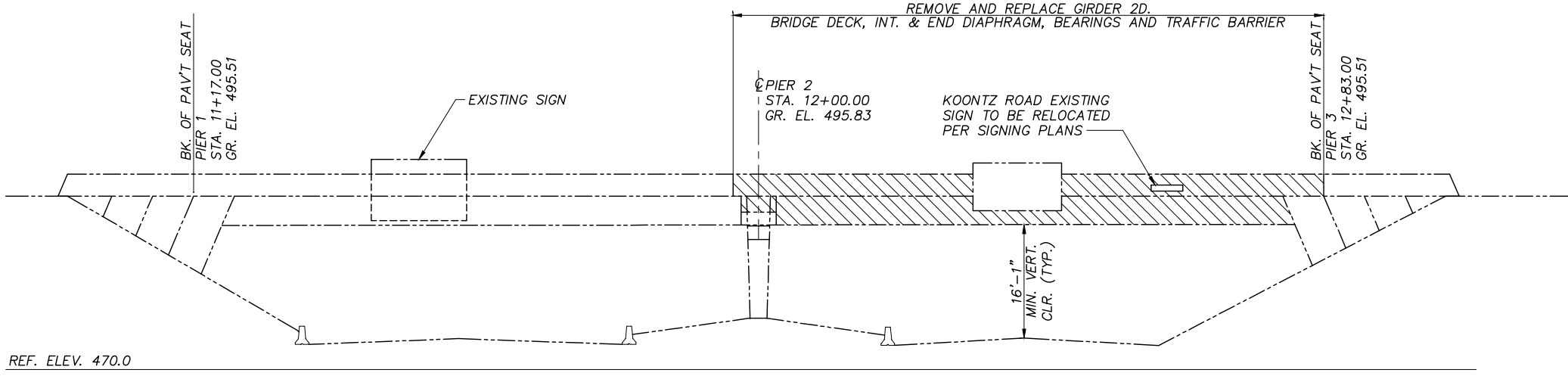
GENERAL NOTES

- ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION DATED 2023.
- THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION 2020 AND INTERIMS THROUGH 2021.
- NEW GIRDER AND PREVIOUSLY REPLACED GIRDERS ARE DESIGNED FOR HL-93. ORIGINAL BRIDGE DESIGNED FOR HS20-S16.
- THE CONCRETE FOR BRIDGE DECK SHALL BE CLASS 4000D. ALL OTHER CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
- DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS ARE BASED ON ORIGINAL CONSTRUCTION RECORDS. THE REPLACED PORTION OF THE STRUCTURE SHALL BE CONSTRUCTED TO MATCH THE REMOVED PORTION OF THE BRIDGE. THESE DIMENSIONS AND ELEVATIONS SHALL BE MEASURED AND VERIFIED BY THE CONTRACTOR IN THE FIELD PRIOR TO ORDERING OF MATERIALS AND FABRICATION.
- UNLESS OTHERWISE SHOWN IN THE PLANS THE CONCRETE COVER MEASURE FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 1 1/2 INCHES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE BRIDGE AND ALL OF ITS COMPONENTS THROUGH ALL STAGES OF REMOVAL AND CONSTRUCTION.

LEGEND

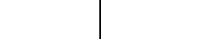

- A 5 IDENTIFIES SECTION OR VIEW
TAKEN OR SHOWN ON BRIDGE SHEET 5
- 1 IDENTIFIES DETAIL
TAKEN OR SHOWN ON THE SAME SHEET
- X FLAGNOTE: IDENTIFIES NOTE REFERENCE ON THE SAME SHEET

P.C. GIRDER (W50G)
GIRDER 2D REPLACEMENT
LOADING: HL-93

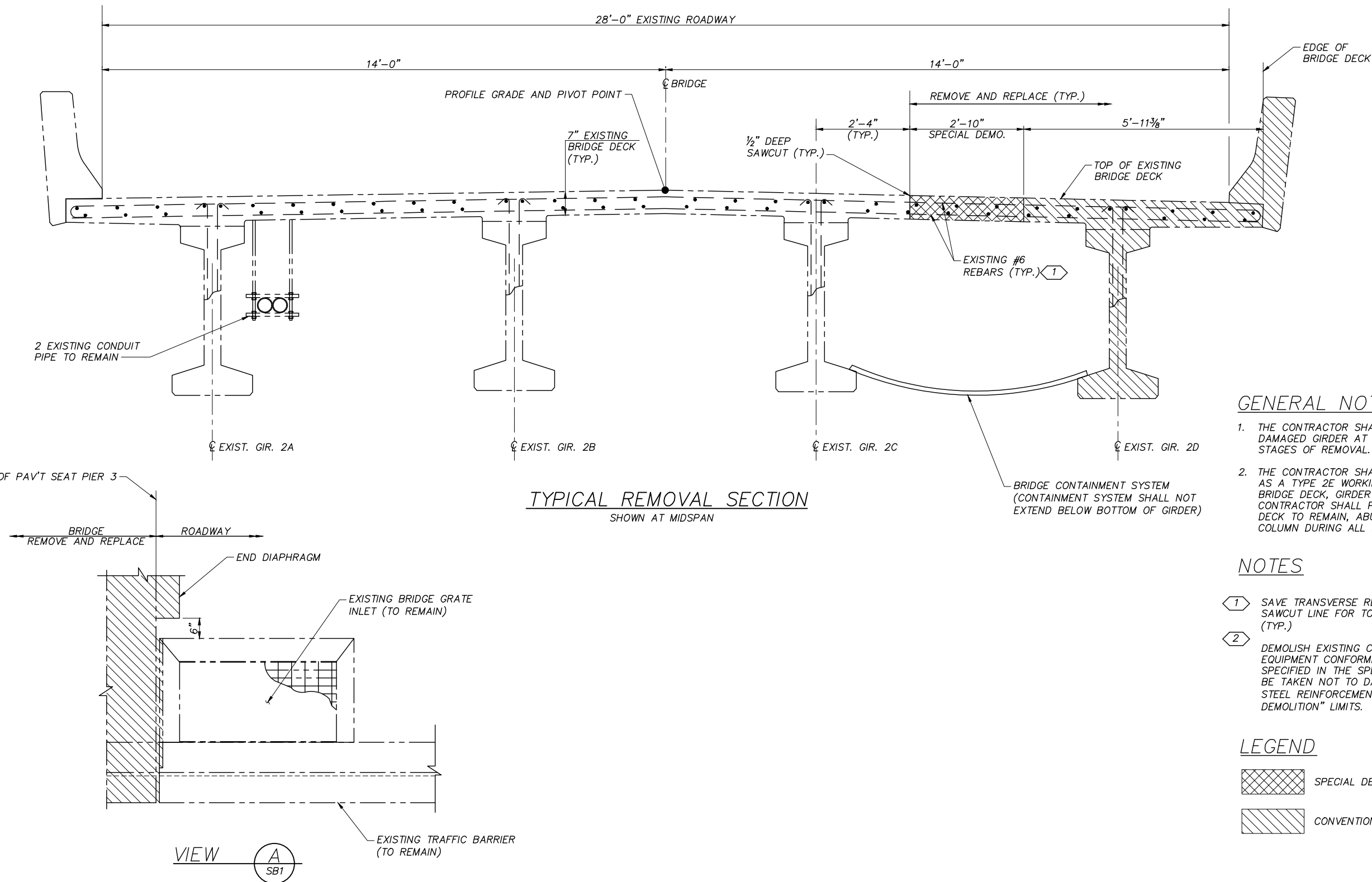


ELEVATION

SR5 I-5 JOB NO. SHEET SB1

FILE NAME		P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 -SB1.DWG				REGION NO.		STATE		FED.AID PROJ.NO.		 SEE SHEET CT1 DATE	 COFFMAN ENGINEERS 10 N. Post St. Spokane, WA 99201 ph 509.328.2994 www.coffman.com	I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR KOONTZ RD OVER I-5 BRIDGE NO. 5/212 LAYOUT	PLAN REF NO.
TIME		10:41:10 AM				10		WASH			SHEET				
DATE		10/3/2022				JOB NUMBER		22X344			10				
PLOTTED BY		D. PROCTOR				CONTRACT NO.					OF				
DESIGNED BY		K. HOOPER				LOCATION NO.					37				
ENTERED BY		D. PROCTOR									SHEETS				
CHECKED BY		H. COFFMAN													
PROJ. ENGR.															
REGIONAL ADM.						REVISION		DATE		BY					

SR5 L-5 JOB NO. _____ SHEET SB2



TYPICAL REMOVAL SECTION
SHOWN AT MIDSPAN


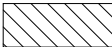
GENERAL NOTES

1. THE CONTRACTOR SHALL BRACE AND SUPPORT THE DAMAGED GIRDER AT ALL TIMES DURING ALL STAGES OF REMOVAL.
2. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLAN AS A TYPE 2E WORKING DRAWING FOR REMOVAL OF BRIDGE DECK, GIRDER AND DIAPHRAGM. THE CONTRACTOR SHALL PROTECT EXISTING BRIDGE DECK TO REMAIN, ABUTMENT, CROSSBEAM AND COLUMN DURING ALL STAGES OF REMOVAL.

NOTES

1. SAVE TRANSVERSE REINFORCEMENT 2'-10" PAST SAWCUT LINE FOR TOP AND BOTTOM MAT STEEL (TYP.)
2. DEMOLISH EXISTING CONCRETE SHOWN, USING EQUIPMENT CONFORMING TO THE RESTRICTIONS SPECIFIED IN THE SPECIAL PROVISIONS. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING PROTRUDING STEEL REINFORCEMENT, AS SPECIFIED BY "SPECIAL DEMOLITION" LIMITS.

LEGEND

-  SPECIAL DEMOLITION (1)
-  CONVENTIONAL DEMOLITION

FILE NAME P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783-SB2.DWG

TIME 12:05:29 PM

DATE 5/20/2022

PLOTTED BY D. PROCTOR

DESIGNED BY K. HOOPER

ENTERED BY D. PROCTOR

CHECKED BY H. COFFMAN

PROJ. ENGR.

REGIONAL ADM.

REVISION

DATE

BY

REGION NO. 10
STATE WASH

JOB NUMBER 22X344

CONTRACT NO.

FED.AID PROJ.NO.

LOCATION NO.



SEE SHEET CT1
DATE

P.E. STAMP BOX

P.E. STAMP BOX



Washington State
Department of Transportation



COFFMAN
ENGINEERS

10 N. Post St.
Spokane, WA 99201
ph 509.328.2994
www.coffman.com

I-5

KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212

REMOVAL DETAILS
SHEET 1 OF 3

PLAN REF NO.

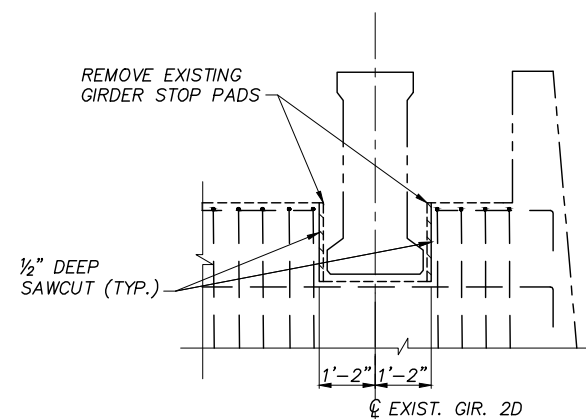
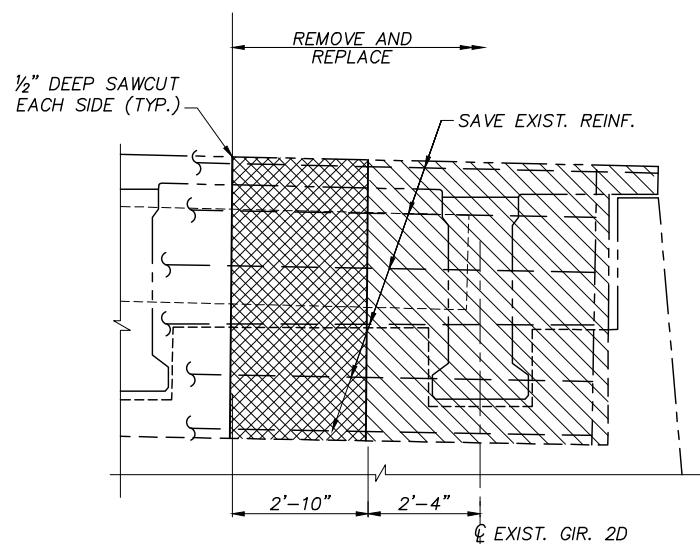
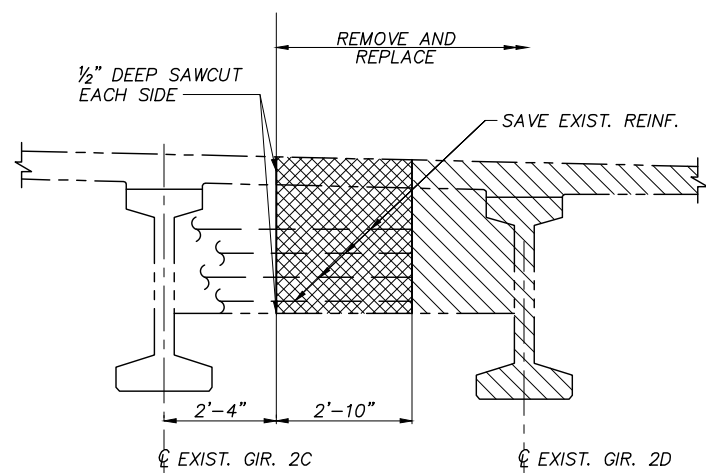
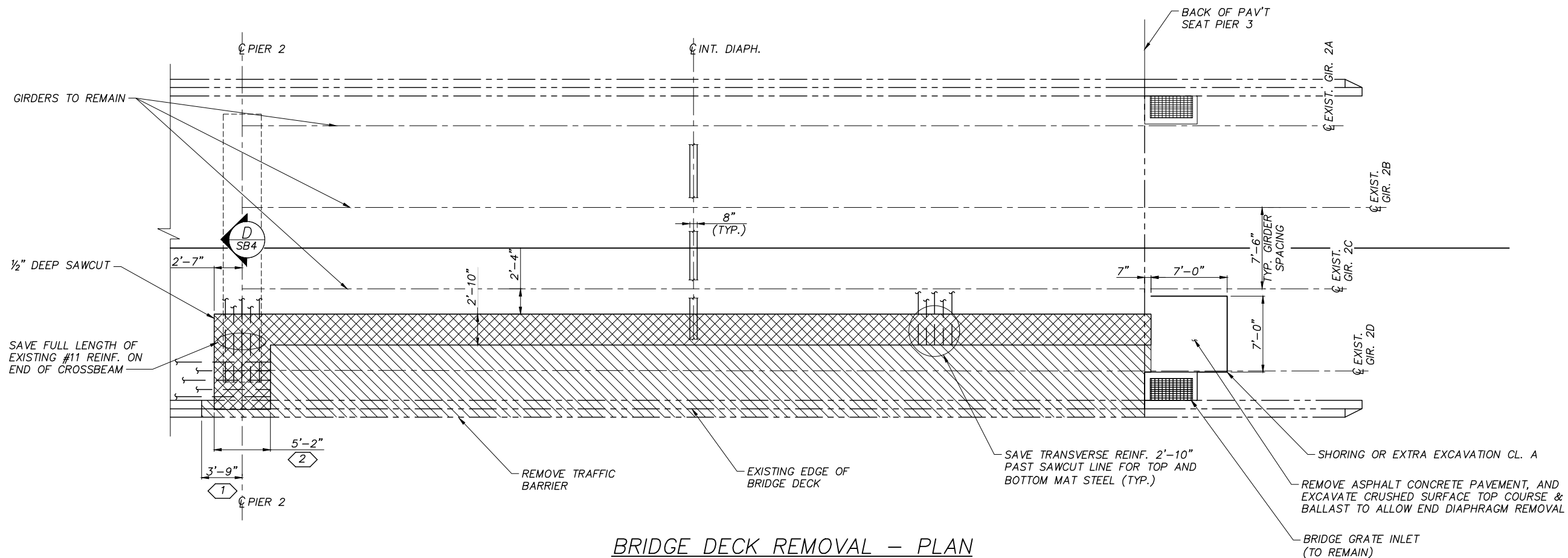
SB2

SHEET 11

OF

37

SHEETS



NOTES

- 1 FIELD VERIFY. REMOVE TRAFFIC BARRIER TO THE CLOSEST OPEN JOINT PAST THE SPECIAL DEMOLITION AREA AT PIER 2.
- 2 SAVE LONGITUDINAL REINFORCEMENT 2'-6" MIN. PAST SAWCUT LINE FOR BOTTOM MAT STEEL & 5'-0" PAST SAWCUT LINE FOR TOP MAT STEEL (TYP.)
- 3 DEMOLISH EXISTING CONCRETE SHOWN, USING EQUIPMENT CONFORMING TO THE RESTRICTIONS SPECIFIED IN THE SPECIAL PROVISIONS. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING PROTRUDING STEEL REINFORCEMENT, AS SPECIFIED BY "SPECIAL DEMOLITION" LIMITS.

LEGEND

- Special Demolition (3)
- Conventional Demolition

FILE NAME	P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 -SB3.DWG
TIME	12:06:10 PM
DATE	5/23/2022
PLOTTED BY	D. PROCTOR
DESIGNED BY	K. HOOPER
ENTERED BY	D. PROCTOR
CHECKED BY	H. COFFMAN
PROJ. ENGR.	
REGIONAL ADM.	
REVISION	
DATE	
BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
22X344		
CONTRACT NO.		LOCATION NO.

SEE SHEET CT1
DATE

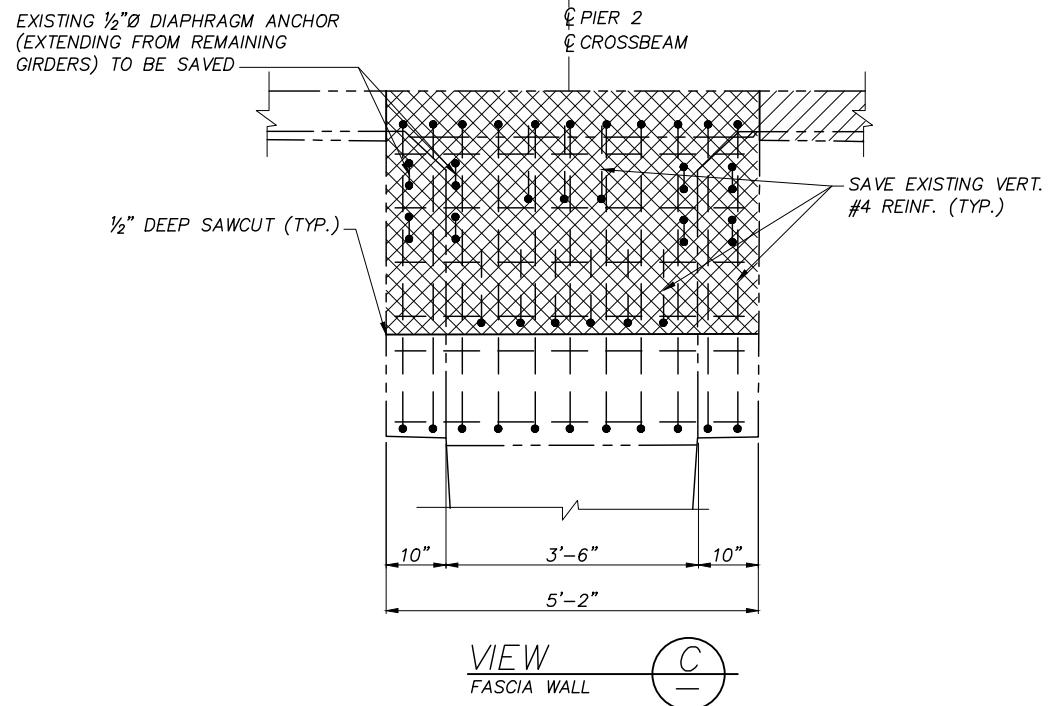
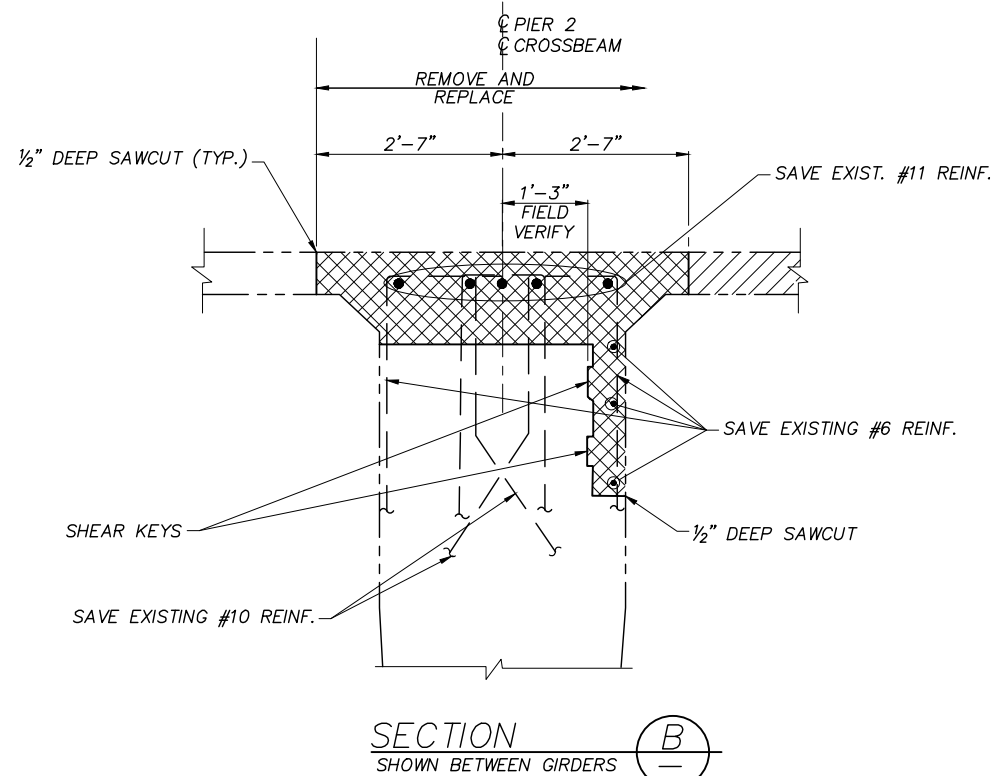
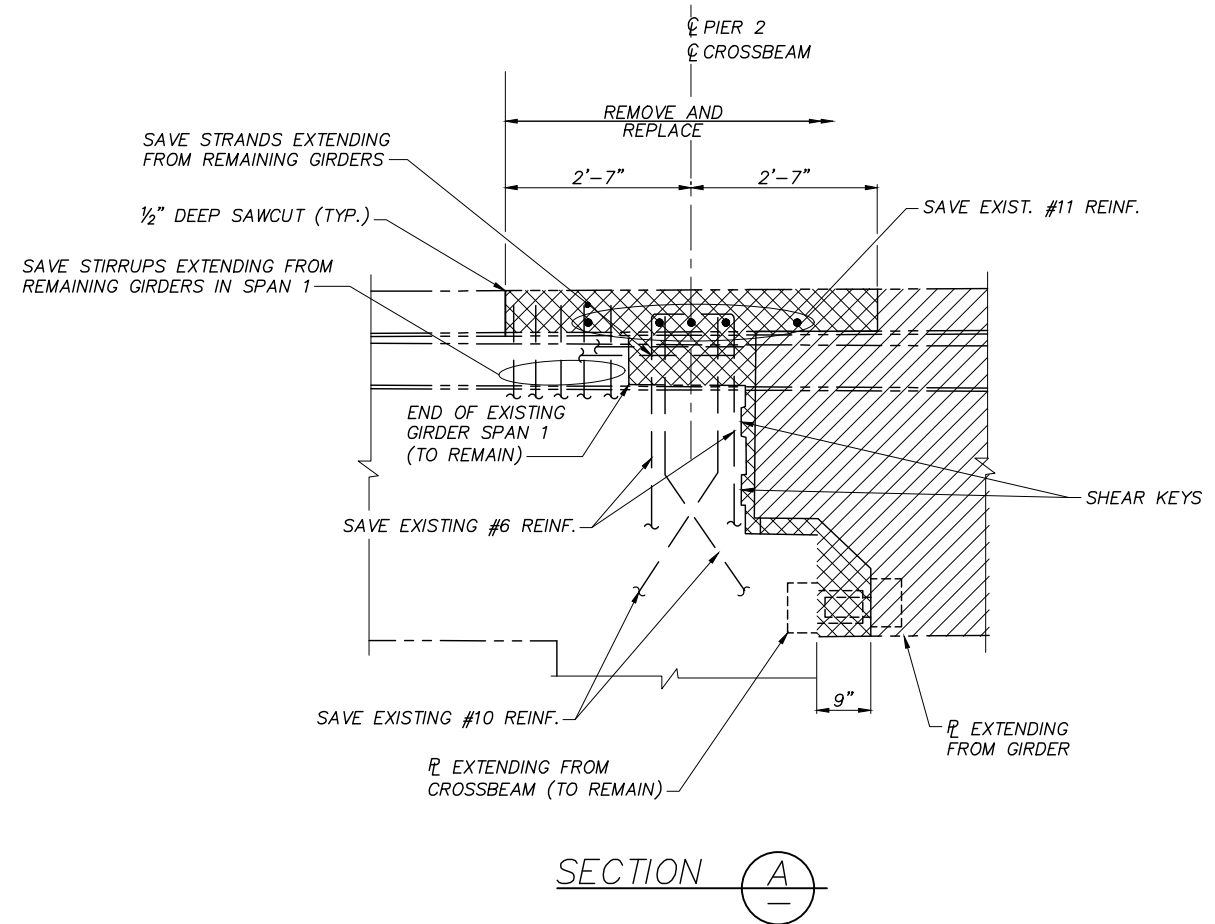
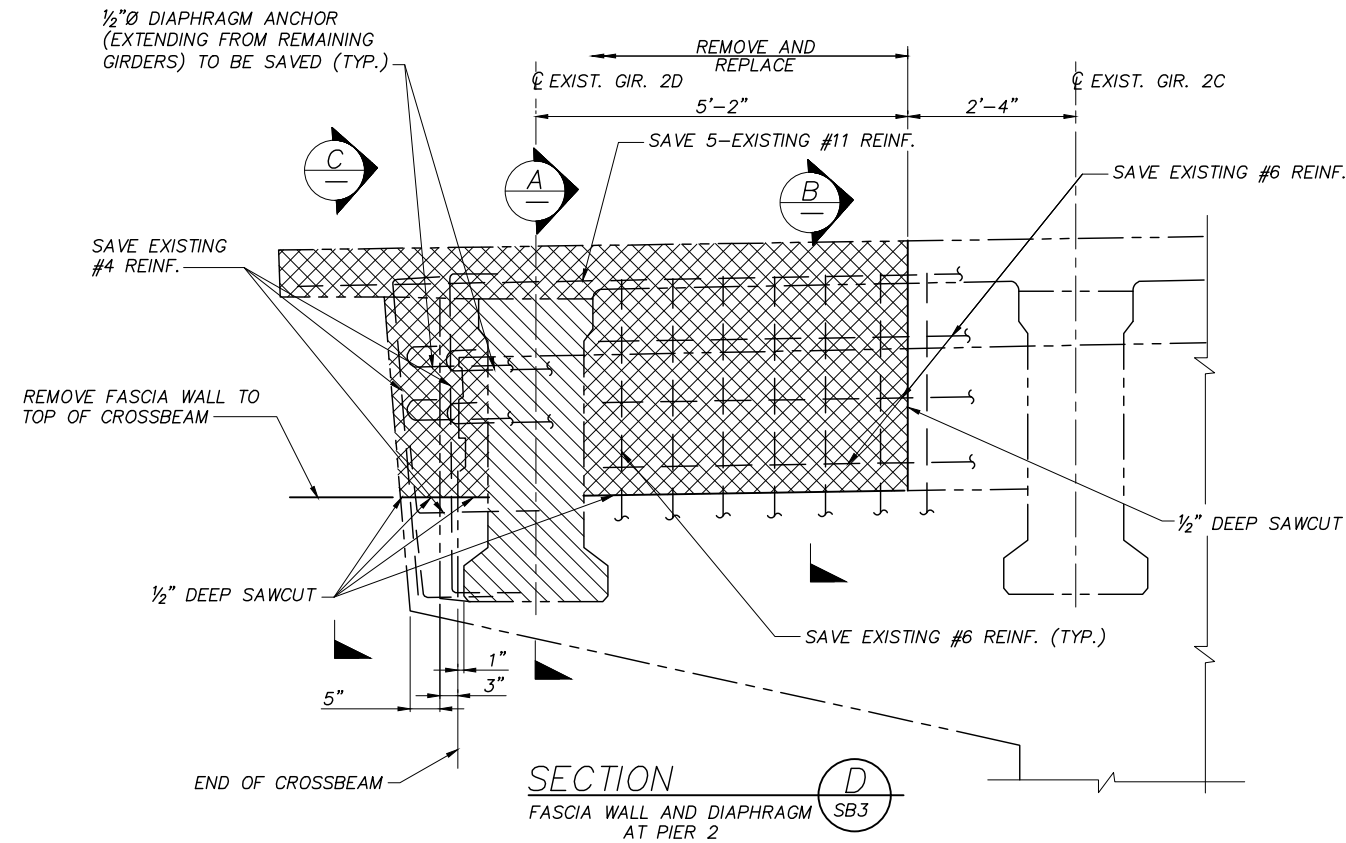
P.E. STAMP BOX

P.E. STAMP BOX



I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212
REMOVAL DETAILS
SHEET 2 OF 3

PLAN REF NO.	SB3
SHEET	12
OF	37
SHEETS	



NOTES

- 1 DEMOLISH EXISTING CONCRETE SHOWN, USING EQUIPMENT CONFORMING TO THE RESTRICTIONS SPECIFIED IN THE SPECIAL PROVISIONS. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING PROTRUDING STEEL REINFORCEMENT, AS SPECIFIED BY "SPECIAL DEMOLITION" LIMITS.

LEGEND

- SPECIAL DEMOLITION 1
- CONVENTIONAL DEMOLITION

FILE NAME	P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783-SB4.DWG	REGION NO.	STATE	FED.AID PROJ.NO.
TIME	8:54:27 AM	10	WASH	
DATE	9/8/2022	JOB NUMBER	22X344	
PLOTTED BY	D. PROCTOR	CONTRACT NO.		LOCATION NO.
DESIGNED BY	K. HOOPER			
ENTERED BY	D. PROCTOR			
CHECKED BY	H. COFFMAN			
PROJ. ENGR.				
REGIONAL ADM.				
REVISION				
DATE				
BY				



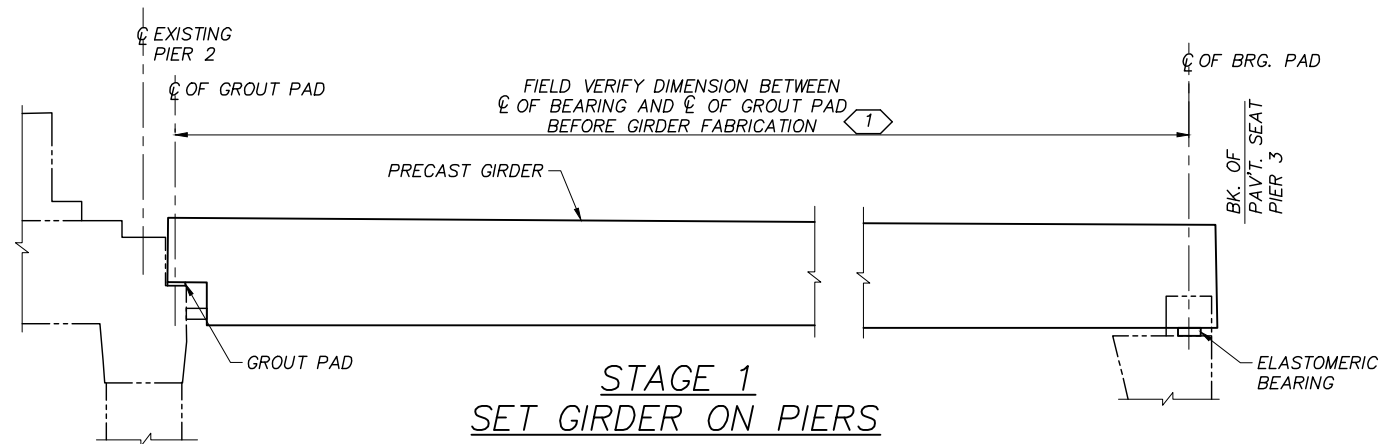
SEE SHEET CT1
DATE

P.E. STAMP BOX



I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212
REMOVAL DETAILS
SHEET 3 OF 3

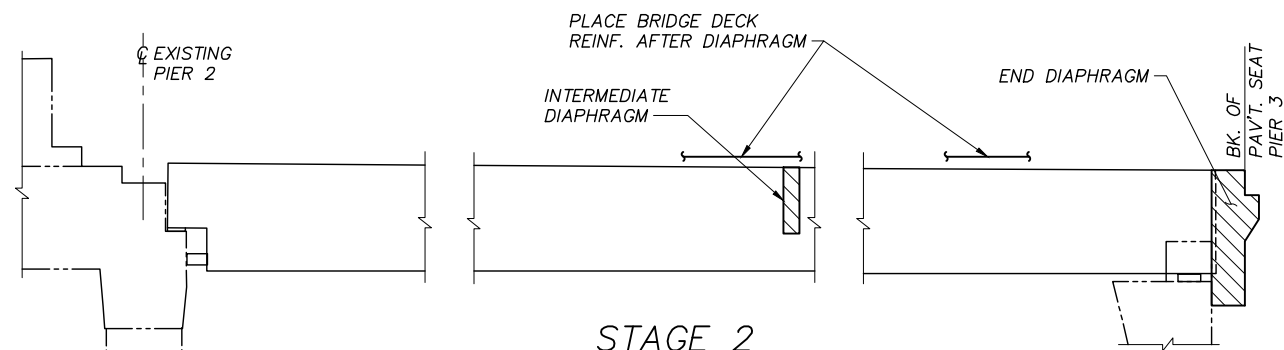
PLAN REF NO.
SB4
SHEET
13
OF
37
SHEETS



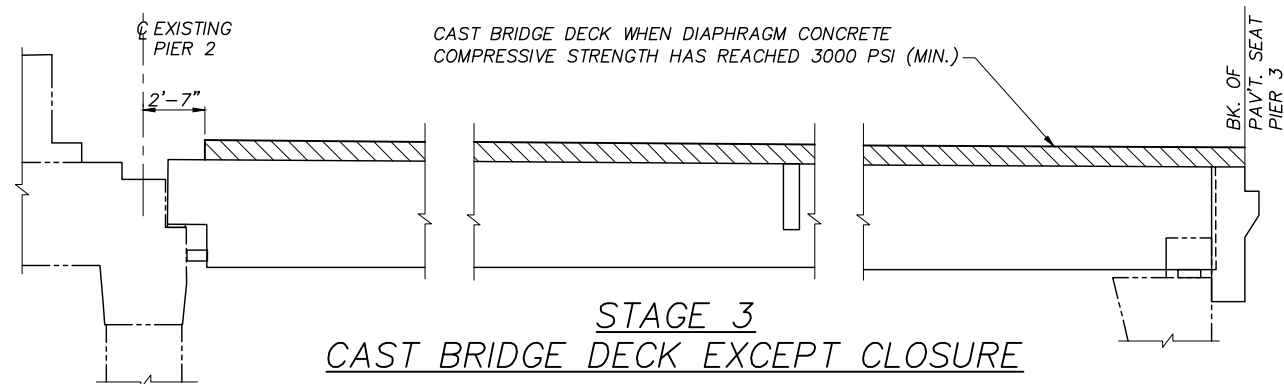
STAGE 1
SET GIRDER ON PIERS
INSTALL TEMPORARY LATERAL BRACING

CONTRACTOR SHALL MAINTAIN STABILITY OF GIRDER DURING DIAPHRAGM AND BRIDGE DECK PLACEMENT.

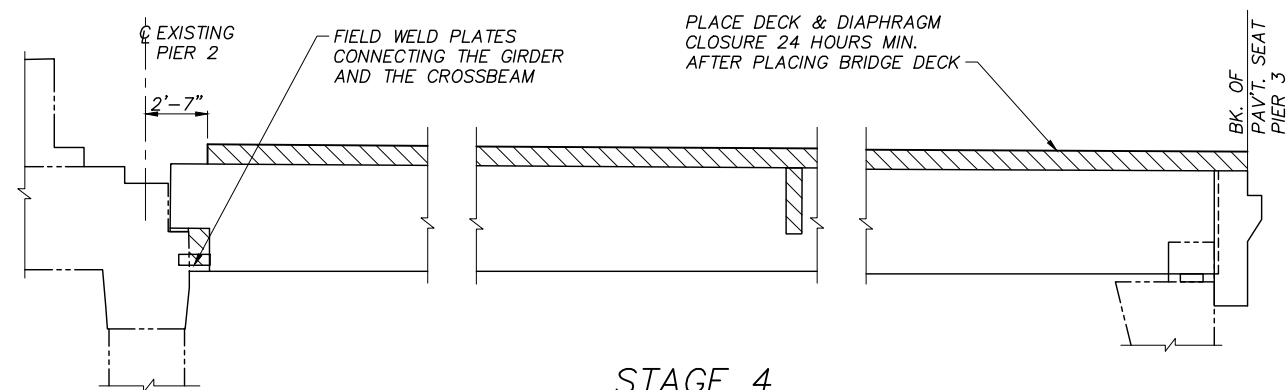
1 CONTRACTOR SHALL SUBMIT TYPE 2 WORKING DRAWINGS, CONSISTING OF WRITTEN PROCEDURES AND METHODS SHOWING HOW THIS DIMENSION WILL BE VERIFIED.



STAGE 2
CAST DIAPHRAGMS EXCEPT CLOSURES
& PLACE BRIDGE DECK REINFORCEMENT

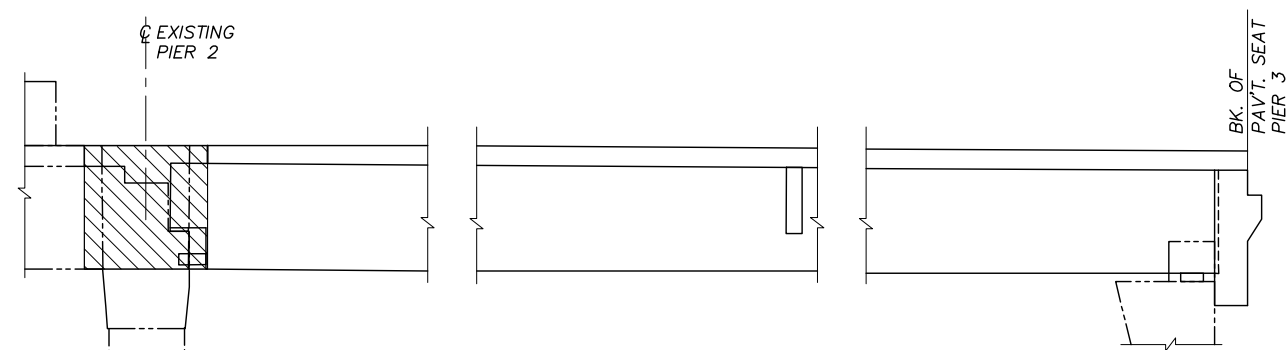


STAGE 3
CAST BRIDGE DECK EXCEPT CLOSURE

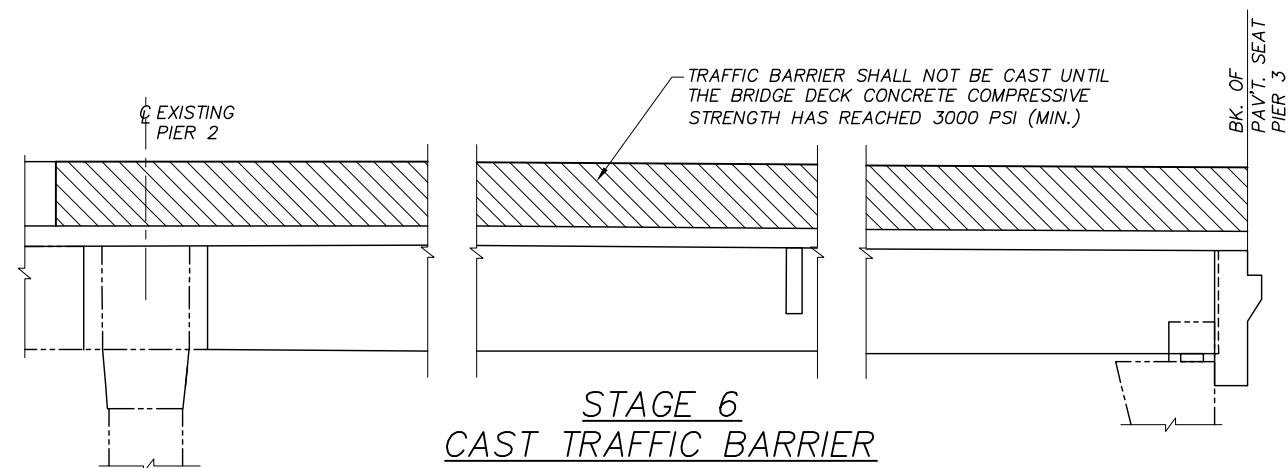


STAGE 4
CAST BRIDGE DECK CLOSURE, INTERMEDIATE AND END DIAPHRAGM
CLOSURES AND GROUT BETWEEN GIRDER END & CROSSBEAM

THE BRIDGE DECK CLOSURE AND THE DIAPHRAGM CLOSURES MAY BE CAST CONCURRENTLY.



STAGE 5
CAST PIER 2 BRIDGE DECK, CROSSBEAM & FASCIA WALL



STAGE 6
CAST TRAFFIC BARRIER

STAGE 7
ROADWAY WORK

PLACE CONTROLLED DENSITY FILL, CRUSHED SURFACING BASE COURSE AND HMA PAVEMENT IN THE BRIDGE APPROACH AREA THAT WAS EXCAVATED AND REMOVED.

SR5 I-5 JOB NO. SB5 SHEET

FILE NAME	P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 -SB5.DWG			
TIME	4:51:29 PM			
DATE	5/23/2022			
PLOTTED BY	D. PROCTOR			
DESIGNED BY	K. HOOPER			
ENTERED BY	D. PROCTOR			
CHECKED BY	H. COFFMAN			
PROJ. ENGR.				
REGIONAL ADM.				
	REVISION	DATE	BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
22X344		
CONTRACT NO.		LOCATION NO.



SEE SHEET CT1
DATE

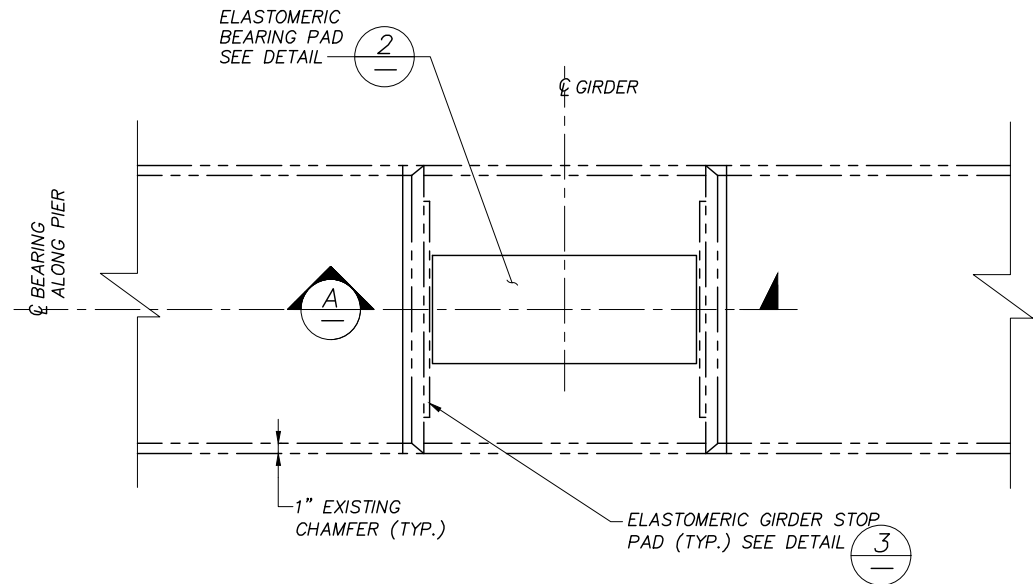
P.E. STAMP BOX

P.E. STAMP BOX

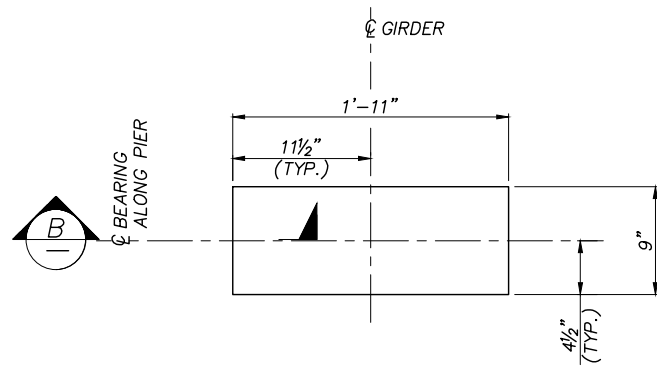


I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212
SUPERSTRUCTURE CONSTRUCTION
SEQUENCE

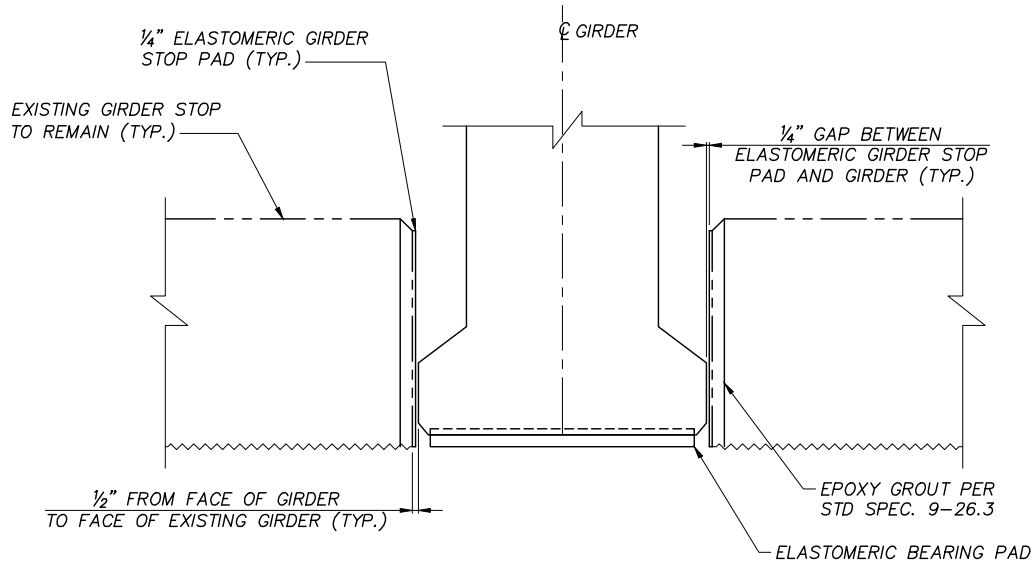
PLAN REF NO.
SB5
SHEET
14
OF
37
SHEETS



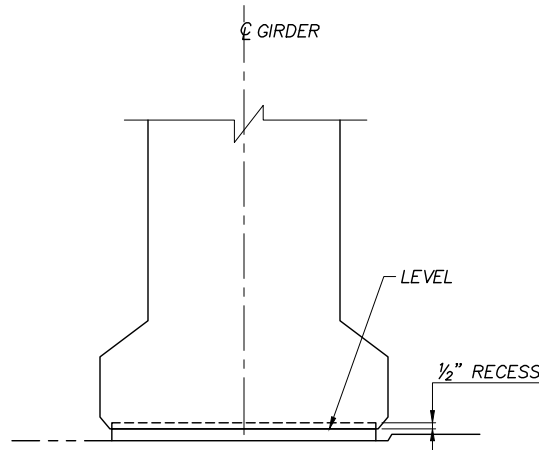
BEARING PAD - PLAN 1
SHOWN AT PIER 3.
GIRDER NOT SHOWN FOR CLARITY.



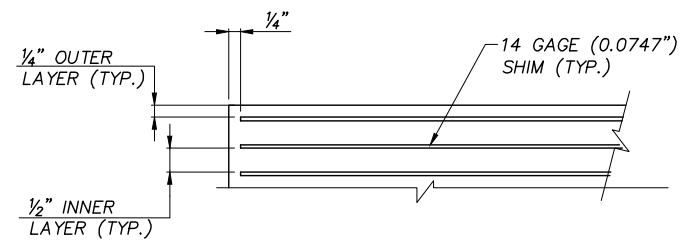
ELASTOMERIC BEARING PAD DETAIL 2
LAMINATED ELASTOMERIC BEARING PAD AT PIER 3 ONLY (3 SHIMS).



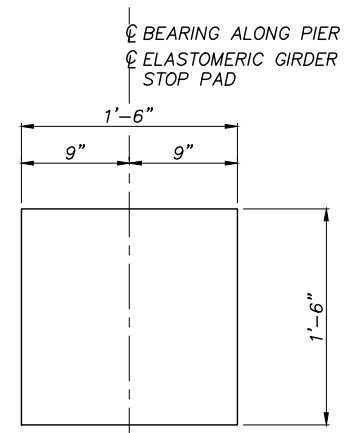
SECTION A



BEARING PAD ELEVATION



SECTION B



ELASTOMERIC GIRDER STOP PAD DETAIL 3
SHEAR MODULUS = 165 PSI

BEARING DESIGN TABLE	
AASHTO METHOD B DESIGN	
SERVICE - 1 LIMIT STATE	
DEAD LOAD (DL) REACTION	76 KIPS
LIVE LOAD REACTION (W/O IMPACT)	45 KIPS
UNLOADED HEIGHT	1.72 IN.
SHEAR MODULUS	165 KSI

NOTES

1. THE ELASTOMERIC STOP PADS SHALL BE BONDED TO THE EXISTING GIRDER STOPS WITH AN ACCEPTED ADHESIVE.

FILE NAME	P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 -SB6.DWG	REGION NO.	STATE	FED.AID PROJ.NO.
TIME	8:18:30 AM	10	WASH	
DATE	10/5/2022	JOB NUMBER	22X344	
PLOTTED BY	D. PROCTOR	CONTRACT NO.		LOCATION NO.
DESIGNED BY	K. HOOPER			
ENTERED BY	D. PROCTOR			
CHECKED BY	H. COFFMAN			
PROJ. ENGR.				
REGIONAL ADM.				
REVISION				
DATE				
BY				



SEE SHEET CT1
DATE

P.E. STAMP BOX

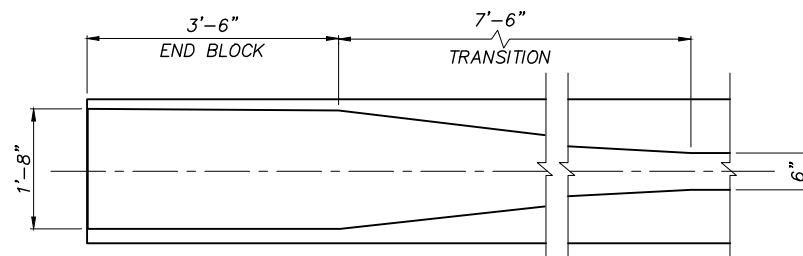
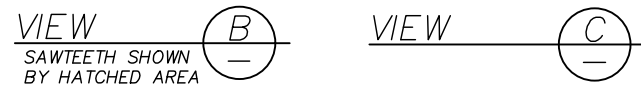
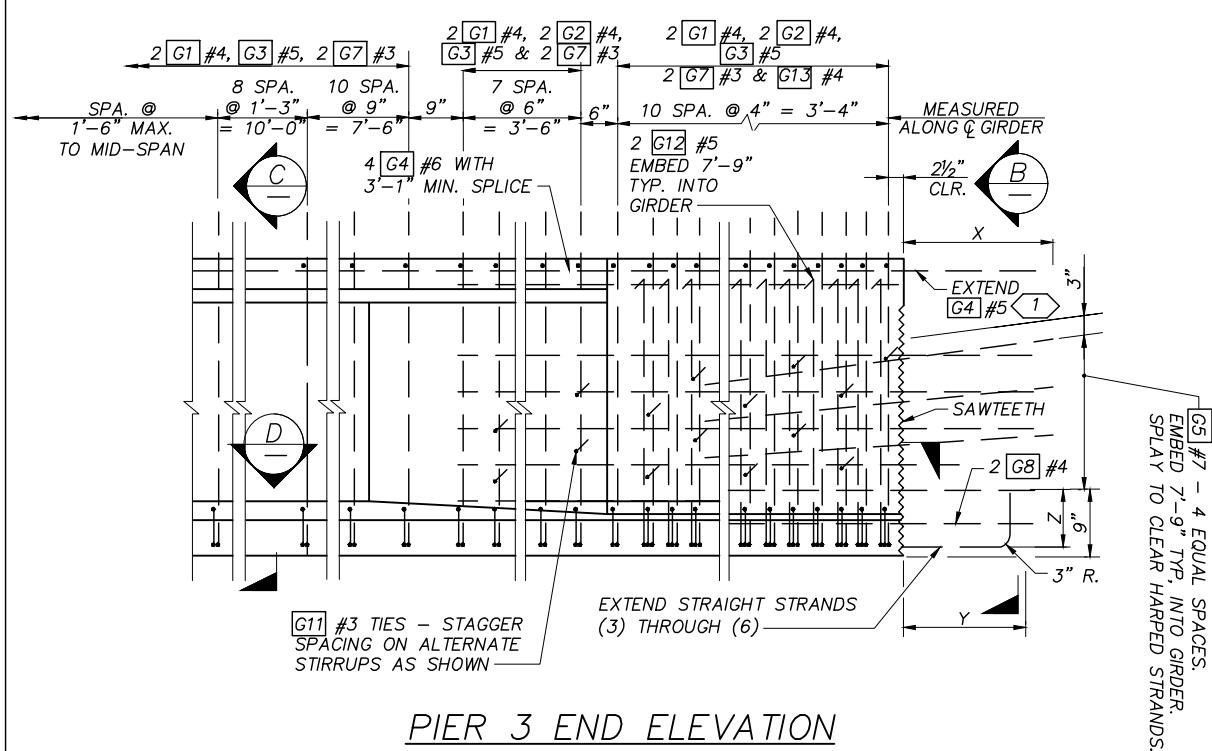
P.E. STAMP BOX



I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212
BEARING DETAILS PIER 3

PLAN REF NO.
SB6
SHEET
15
OF
37
SHEETS





REINFORCEMENT NOT
SHOWN FOR CLARITY

Diaphragm Type	END TYPE	BEARING RECESS	X	Y	Z	SAWTEETH
End Diaph. on Girder	A	YES	9"	9"	9"	YES

MARK	NOTE	LOCATION	SIZE
G1		GIRDER STIRRUPS	4
G2		GIRDER END STIRRUPS	5
G3		GIRDER TOP FLANGE	5 STR.
G4		GIRDER LONGIT. FULL LENGTH	5 STR.
G5		GIRDER END LONGIT.	7 STR.
G7	5	GIRDER BOT. FLANGE TIES	3
G8		GIRDER END LONGIT.	4 STR.
G9	5	GIRDER BOT. FLANGE TIES	3
G10	5	GIRDER BOT. FLANGE TIES	3
G11		GIRDER END TIES	3
G12	7	GIRDER TOP FLANGE	5
G13		GIRDER TOP TIES	4

BENDING DIAGRAM (ALL DIMENSIONS ARE OUT TO OUT)
NOTE: FOR DIMENSION "A", SEE "GIRDER SCHEDULE"

FIELD BEND ALT. SIDES

VARIES DETERMINE FROM PLANS

R=2 1/2"

DETERMINE FROM PLANS

FILE NAME	P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 -SB8.DWG					REGION NO.	STATE	FED.AID PROJ.NO.
TIME	12:52:04 PM					10	WASH	
DATE	8/19/2022					JOB NUMBER		LOCATION NO.
PLOTTED BY	D. PROCTOR					22X344		
DESIGNED BY	K. HOOPER					CONTRACT NO.		
ENTERED BY	D. PROCTOR							
CHECKED BY	H. COFFMAN							
PROJ. ENGR.								
REGIONAL ADM.			REVISION	DATE	BY			



I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212

W50G GIRDER
DETAILS 1 OF 4

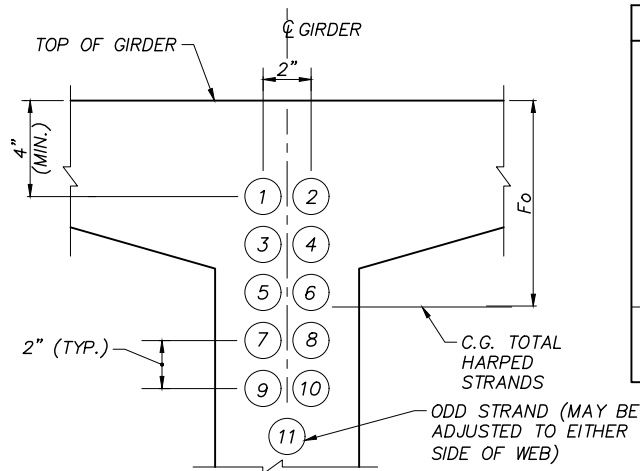
PLAN REF NO.	SB8
SHEET	17
OF	37
SHEETS	

1. ~~PLAN LENGTH SHALL BE INCREASED AS NECESSARY TO COMPENSATE FOR SHORTENING DUE TO PRESTRESS AND SHRINKAGE.~~
2. ~~ALL PRETENSIONED AND TEMPORARY STRANDS SHALL BE 0.6"Ø LOW RELAXATION STRANDS (AASHTO M203 GRADE 270.)~~
3. ~~CUT ALL STRANDS FLUSH WITH THE GIRDER ENDS AND PAINT WITH AN APPROVED EPOXY RESIN, EXCEPT FOR EXTENDED STRANDS AS SHOWN.~~
4. ~~THE TOP SURFACE OF THE GIRDER FLANGE SHALL BE ROUGHENED IN ACCORDANCE WITH SECTION 6-02.3(25)H OF THE STANDARD SPECIFICATIONS.~~
5. ~~LIFTING EMBEDMENTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6-02.3(25)J OF THE STANDARD SPECIFICATIONS.~~
6. ~~CAUTION SHALL BE EXERCISED IN HANDLING AND PLACING GIRDERS. ALL GIRDERS SHALL BE CHECKED BY THE CONTRACTOR TO ENSURE THAT THEY ARE BRACED ADEQUATELY TO PREVENT TIPPING AND TO CONTROL LATERAL BENDING DURING SHIPPING. ONCE ERECTED, ALL GIRDERS SHALL BE BRACED Laterally TO PREVENT TIPPING UNTIL THE DIAPHRAGMS ARE CAST AND CURED.~~
7. ~~FORMS FOR BEARING PAD RECESSES SHALL BE CONSTRUCTED AND FASTENED IN SUCH A MANNER AS TO NOT CAUSE DAMAGE TO THE GIRDER DURING THE STRAND RELEASE OPERATION.~~
8. ~~TEMPORARY TOP STRANDS SHALL BE EITHER PRETENSIONED OR POST-TENSIONED IN ACCORDANCE WITH SECTION 6-02.3(25)L OF THE STANDARD SPECIFICATIONS AND THE GIRDER DETAILS SHEETS. THE LIFTING LOCATION "L" AND CONCRETE RELEASE STRENGTH "f'ci" SHOWN IN THE GIRDER SCHEDULE ASSUME THAT THE TEMPORARY TOP STRANDS ARE PRETENSIONED. ALTERNATIVELY, POST-TENSIONED TEMPORARY TOP STRANDS MAY BE USED IF THE LIFTING POINTS IN THE GIRDER SCHEDULE ARE MAINTAINED AND THE STRANDS ARE STRESSED PRIOR TO LIFTING THE GIRDER FROM THE FORM.~~

1. FIELD BENDING REQUIRED TO OBTAIN 1½" CONCRETE COVER AT PAVEMENT SEAT.
2. OMIT HOLES AND PLACE INSERTS ON THE INTERIOR FACE OF EXTERIOR GIRDERS. PLACE HOLES AND INSERTS PARALLEL TO SKEW. INSERTS SHALL BE 1"Ø MEADOWBURKE MX-3 HI-TENSILE, 1"Ø MEADOWBURKE FX-19 FERRULE INSERT, 1"Ø x 5½" WILLIAMS F22 OPEN FERRULE INSERT, 1"Ø x 4½" DAYTON-SUPERIOR F-62 FLARED THIN SLAB FERRULE INSERT OR APPROVED EQUAL.
3. MAXIMUM SLOPE FOR STRANDS:
8 : 1 FOR EACH 0.6"Ø STRAND
4. VARIES FOR SKEWED ENDS.
5. PAIRS OF [G7] BARS, OR [G9] AND [G10] BARS, MAY BE USED INTERCHANGEABLY AS BOTTOM FLANGE TIES.
6. SHALL BE CHECKED FOR EFFECT OF VERTICAL CURVE.
7. BEND AS NECESSARY TO MAINTAIN CONCRETE COVER.

GIRDER SCHEDULE

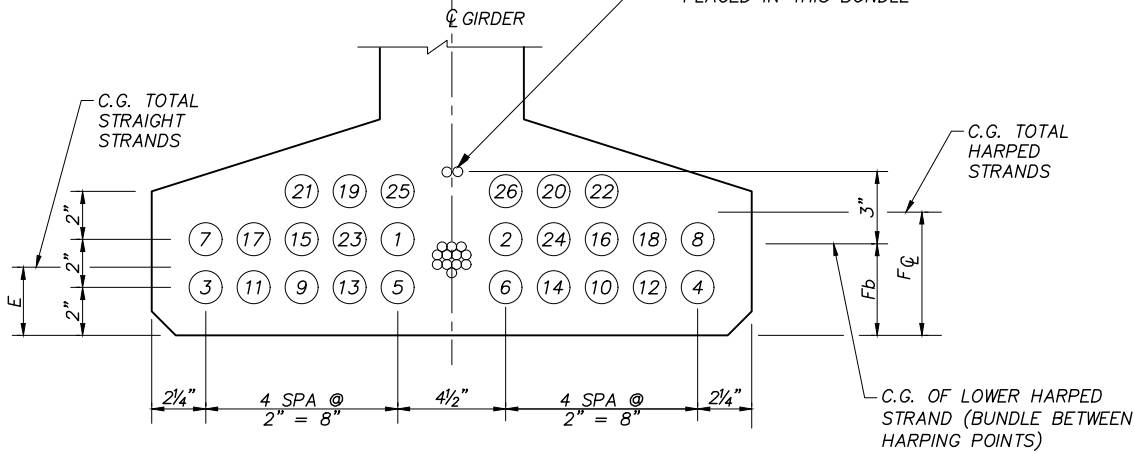
DIMENSION "A" AT \bar{C} BEARINGS = 8½"												BASED ON GIRDER DEFELECTION = "D" AT TIME OF SLAB PLACEMENT (120 DAYS)														
SPAN	GIRDER	END (PIER 2)	END (PIER 3)	L	L _L	L _T	θ ₁ (DEG.)	θ ₂ (DEG.)	P ₁	P ₂	PLAN LENGTH (ALONG GIRDER GRADE)	MIN. CONC. COMP. STRENGTH		HARPED		STRAIGHT		TEMPORARY		LOCATION OF C.G. STRANDS				C	D @ 40 DAYS	D @ 120 DAYS
												@ FINAL F'C (KSI)	@ RELEASE F'C (KSI)	NO. OF STRANDS	JACKING FORCE (KIPS)	NO. OF STRANDS	JACKING FORCE (KIPS)	NO. OF STRANDS	JACKING FORCE (KIPS)	E	F _g	F _b	F _o			
2	D	DAPPED	A	3'-0"	4'-2"	4'-2"	90	90	4½"	1'-3"	81'-0½"	7.5	9.0	8	300	16	600	4	175	3½"	4"	4"	10"	¾"	⅞"	1⅞"



STRAND PATTERN AT GIRDER END

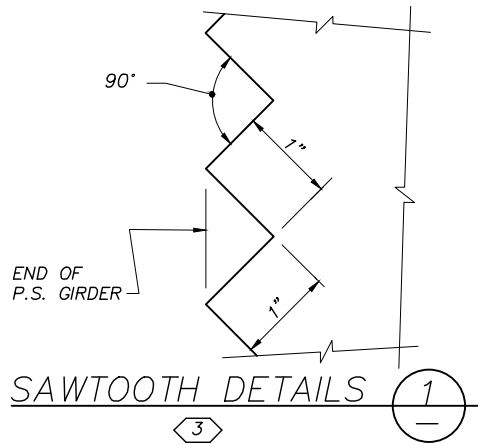
HARPED STRAND LOCATION SEQUENCE SHALL BE AS SHOWN (1), (2) ETC.

ALL HARPED STRANDS IN EXCESS OF 12 SHALL BE PLACED IN THIS BUNDLE

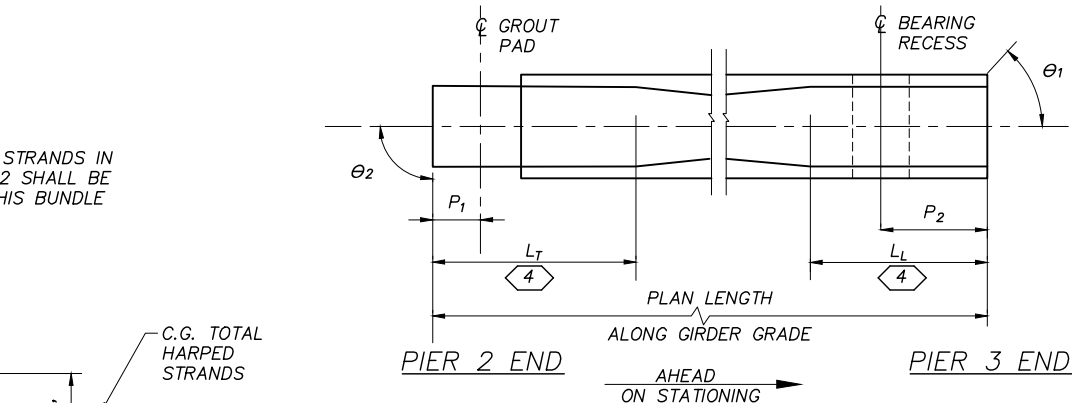


STRAND PATTERN AT \bar{C} SPAN

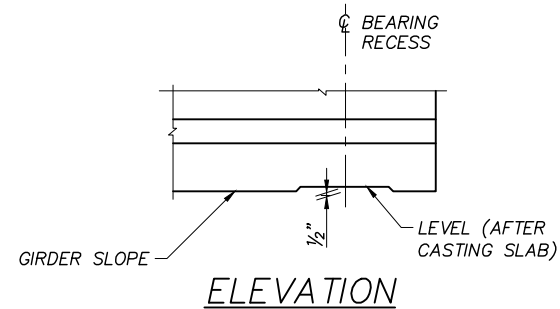
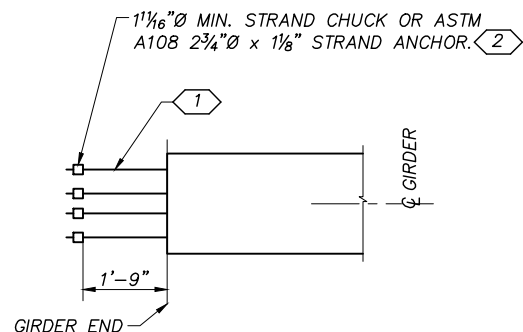
STRAIGHT STRAND LOCATION SEQUENCE SHALL BE AS SHOWN (1), (2) ETC.



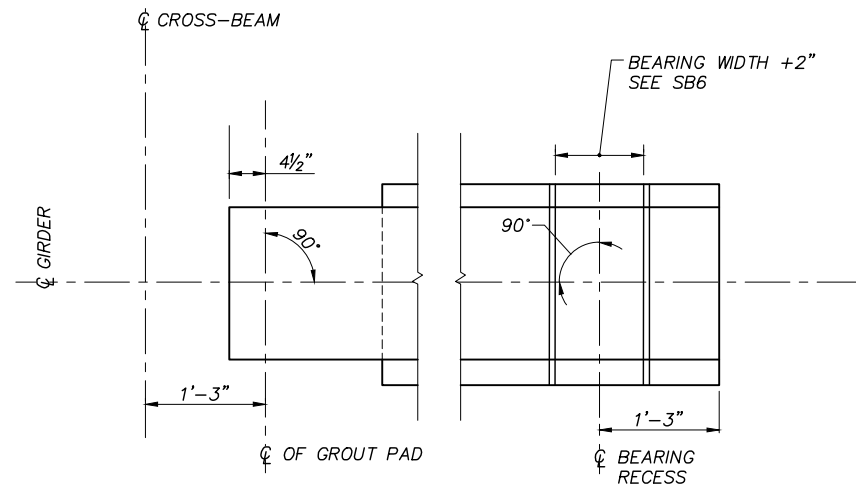
SAWTOOTH DETAILS



STRAND EXTENSION DETAIL



ELEVATION

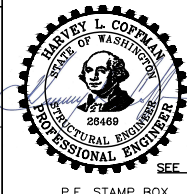


PLAN BEARING DETAILS

NOTES:

- EXTEND STRAIGHT STRANDS (3) THROUGH (6) AT BOTH ENDS.
- ANCHOR STRAND WITH WEDGES BEFORE GIRDER ERECTION. VERIFY WEDGES ARE SEATED TIGHTLY IMMEDIATELY BEFORE PLACING DIAPHRAGM CONCRETE.
- SAWTEETH ARE FULL WIDTH - USE SAWTOOTH KEYS FROM BOTTOM OF BOTTOM FLANGE TO BOTTOM OF LOWEST HARPED STRANDS AS WELL AS TOP FLANGE ADJACENT TO HARPED STRANDS AS SHOWN IN VIEW B - SB8.
- L_L AND L_T ARE SHIPPING SUPPORT LOCATIONS AT END 1 AND END 2.

FILE NAME	P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 -SB9.DWG	REGION NO.	STATE	FED.AID PROJ.NO.
TIME	10:03:20 AM	10	WASH	
DATE	10/5/2022	JOB NUMBER	22X344	
PLOTTED BY	D. PROCTOR	CONTRACT NO.		LOCATION NO.
DESIGNED BY	K. HOOPER			
ENTERED BY	D. PROCTOR			
CHECKED BY	H. COFFMAN			
PROJ. ENGR.				
REGIONAL ADM.		REVISION	DATE	BY



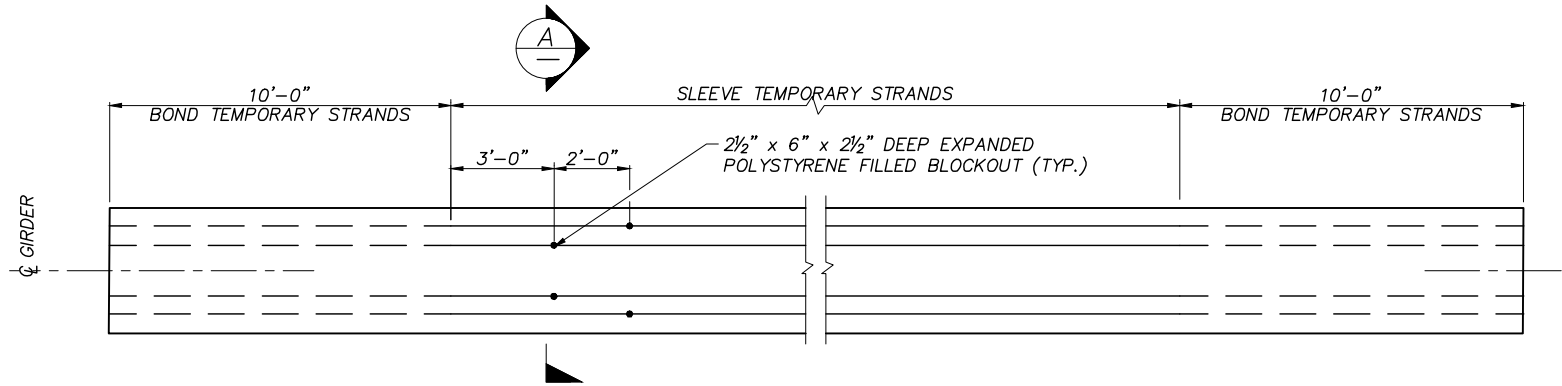
SEE SHEET CT1 DATE

P.E. STAMP BOX



I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212
W50G GIRDER
DETAILS 2 OF 4

PLAN REF NO.	SB9
SHEET	18
OF	37
SHEETS	

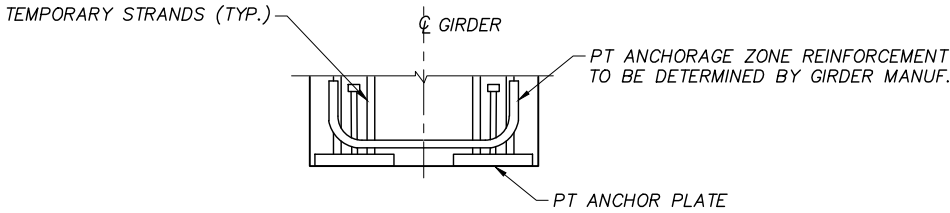


PLAN
PRETENSIONED TEMPORARY
TOP STRANDS

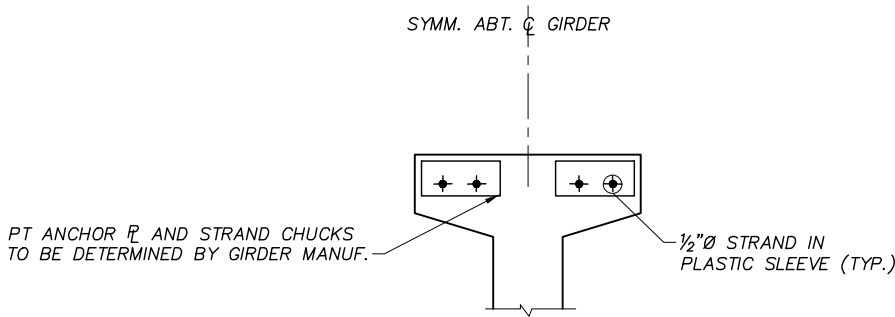
POST-TENSIONED TEMPORARY TOP STRANDS SIMILAR, EXCEPT 10'-0" LENGTH OF BONDING OCCURS AT ONE END ONLY. THE OPPOSING END IS ANCHORED WITH PLATES AND STRAND CHUCKS.

TEMPORARY STRAND
CUTTING SEQUENCE

1. ERECT AND BRACE GIRDERS.
2. JUST PRIOR TO CUTTING THE TEMPORARY STRANDS, REMOVE EXPANDED POLYSTYRENE IN BLOCKOUTS IN TOP FLANGE OF GIRDERS. ONCE THE EXPANDED POLYSTYRENE HAS BEEN REMOVED FROM THE STRAND DETENSIONING BLOCKOUT, PREVENT MOISTURE FROM ENTERING THE BLOCKOUT UNTIL THE TEMPORARY TOP STRAND IS CUT AND THE BLOCKOUT FILLED WITH GROUT.
3. CUT STRANDS IN BLOCKOUTS. STRANDS MAY BE CUT BY USING A CUTTING TORCH AND MOVING THE FLAME BACK AND FORTH OVER THE LENGTH OF EXPOSED STRAND TO LET INDIVIDUAL WIRES BREAK ONE AT A TIME TO LESSEN THE SHOCK TO THE GIRDER. STRANDS SHALL BE RELEASED IN A SYMMETRICAL MANNER ABOUT THE GIRDER CENTERLINE STARTING WITH THOSE NEAREST THE CENTERLINE AND WORKING OUTWARDS. FOR POST-TENSIONED TEMPORARY TOP STRANDS, ACTIVELY RESTRAIN THE STRAND CHUCKS AT THE GIRDER ENDS DURING CUTTING.
4. WITHIN 24 HOURS OF CUTTING THE TEMPORARY STRANDS, FILL THE BLOCKOUTS WITH A GROUT CONFORMING TO STD. SPEC. 9-20.3(2). REMOVE ALL MOISTURE IN BLOCKOUTS PRIOR TO FILLING THEM WITH GROUT.

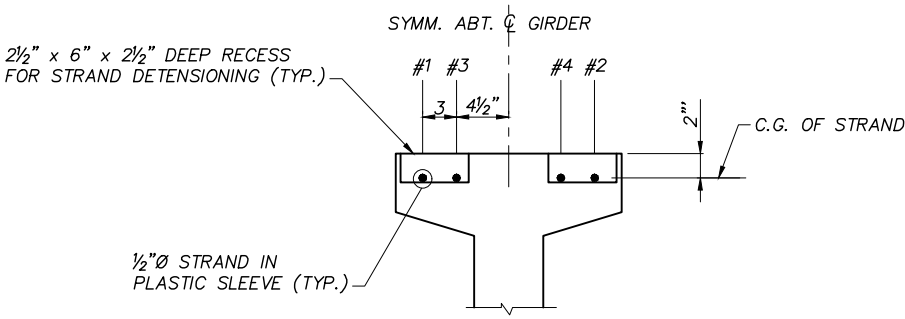


PLAN
TEMPORARY STRANDS
POST-TENSIONED ALTERNATE



END VIEW
TEMPORARY STRAND
POST-TENSIONED ALTERNATE

ADJUST ~~64~~ BARS TO CLEAR THE STEEL PLATE



SECTION A

FILE NAME P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 - SB10.DWG							
TIME	3:31:22 PM				REGION NO.	STATE	FED.AID PROJ.NO.
DATE	8/17/2022				10	WASH	
PLOTTED BY	D. PROCTOR				JOB NUMBER 22X344		
DESIGNED BY	K. HOOPER						LOCATION NO.
ENTERED BY	D. PROCTOR				CONTRACT NO.		
CHECKED BY	H. COFFMAN						
PROJ. ENGR.							
REGIONAL ADM.	REVISION			DATE	BY		



SEE SHEET CT1
DATE

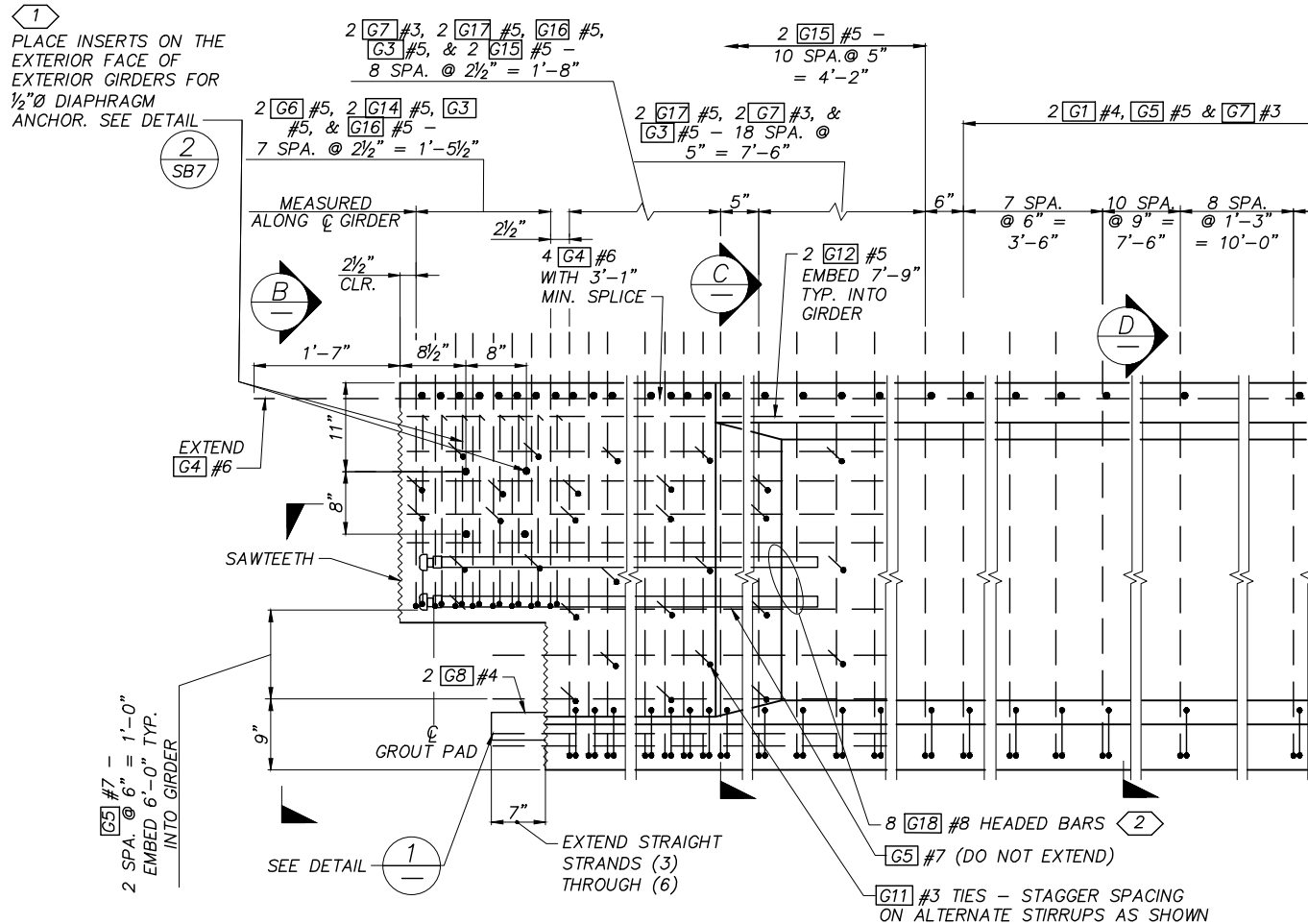
P.E. STAMP BOX

P.E. STAMP BOX



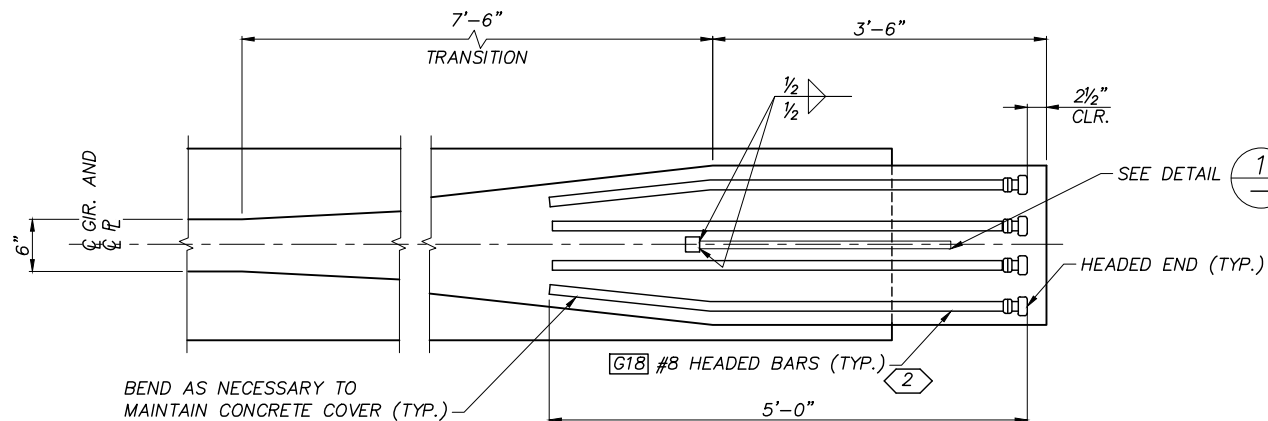
I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212
W50G GIRDER
DETAILS 3 OF 4

PLAN REF NO.
SB10
SHEET 19 OF 37 SHEETS



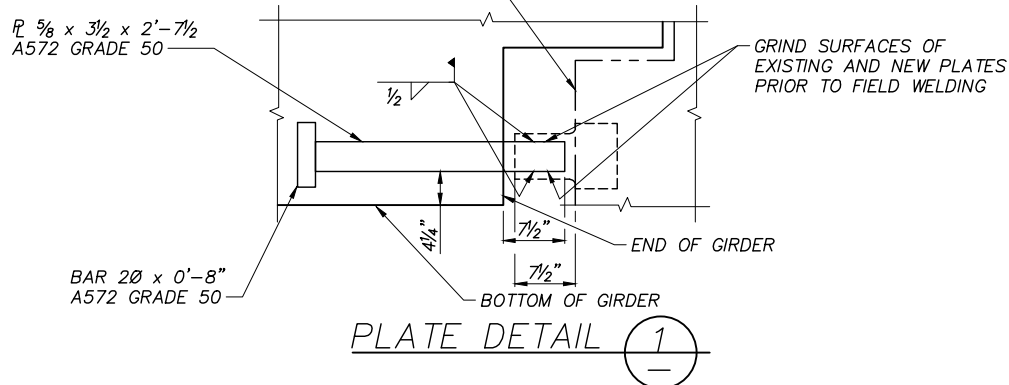
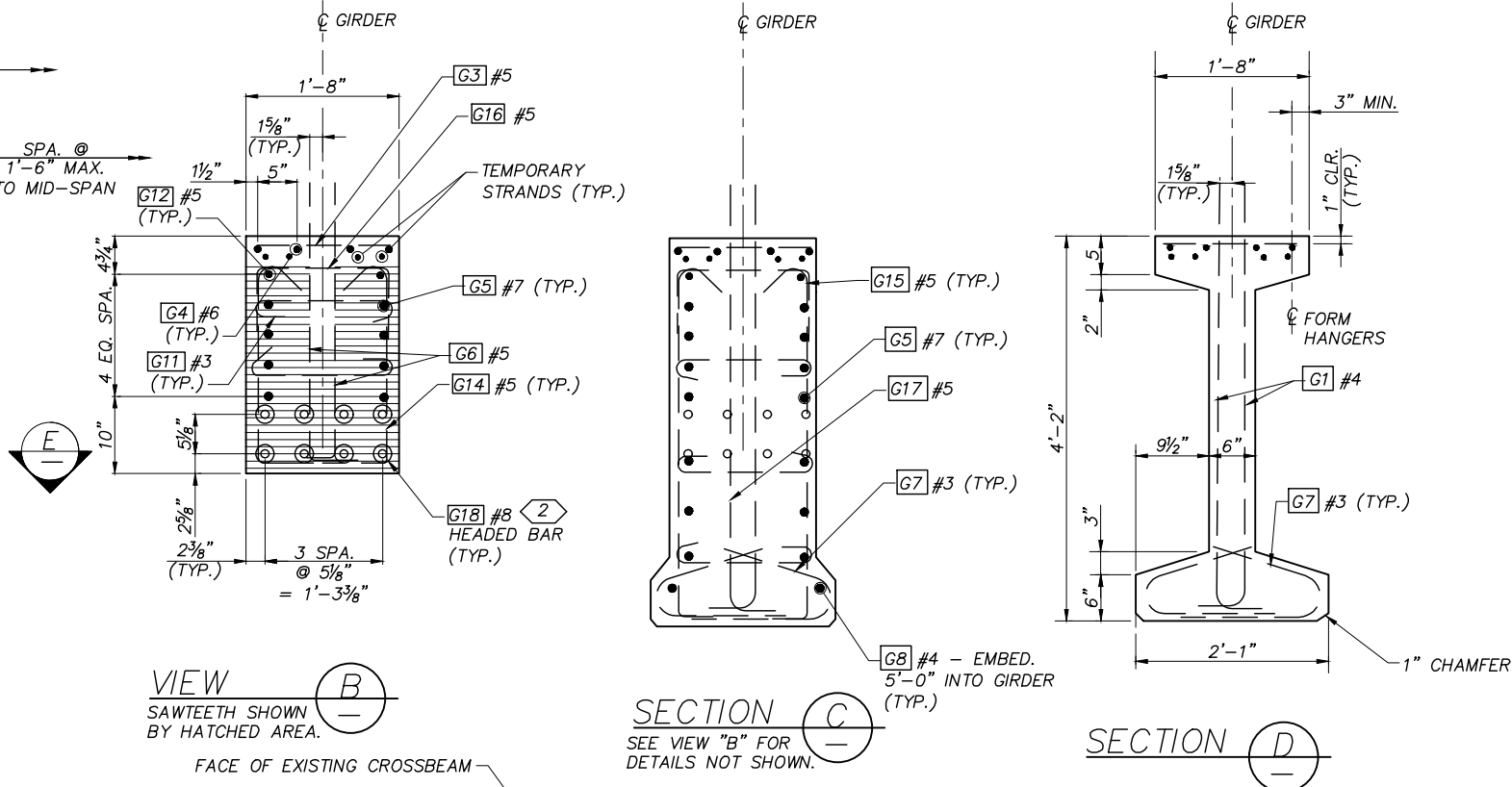
PIER 2 DAPPED END ELEVATION

DAPPED END SHOWN

HARPED STRANDS NOT SHOWN FOR CLARITY.
EXTEND 4 HARPED STRANDS (1) THROUGH (4) 1'-7"

SECTION E

REINFORCEMENT NOT SHOWN FOR CLARITY



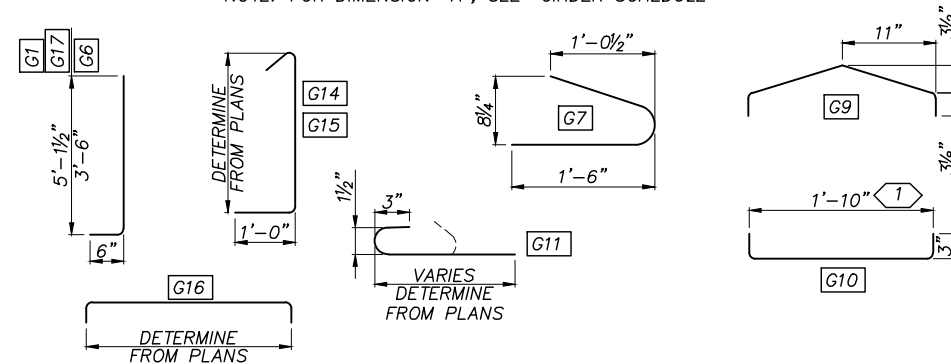
NOTES:

- 1 INSERT SHALL BE 1/2" Ø BURKE HI-TENSILE, LANCASTER MALLEABLE OR APPROVED EQUAL.
- 2 HEADED BARS SHALL MEET THE REQUIREMENTS OF SECTION 9-07.2(1) AND HEADED BAR DIAMETER SHALL NOT BE GREATER THAN 2 1/4"
- 3 PAIRS OF [G7] BARS, OR [G9] AND [G10] BARS, MAY BE USED INTERCHANGEABLY AS BOTTOM FLANGE TIES.
- 4 BEND AS NECESSARY TO MAINTAIN CONCRETE COVER.

MARK	LOCATION	SIZE
G1	GIRDER STIRRUPS	4
G2	GIRDER END STIRRUPS	4
G3	GIRDER TOP FLANGE	5 STR.
G4	GIRDER LONGIT. FULL LENGTH	6 STR.
G5	GIRDER END LONGIT.	7 (4)
G6	GIRDER STIRRUPS	5
G7	GIRDER BOT. FLANGE TIES	3
G8	GIRDER END LONGIT.	4 STR.
G9	GIRDER BOT. FLANGE TIES	3
G10	GIRDER BOT. FLANGE TIES	3
G11	GIRDER TIES	3
G12	GIRDER TOP FLANGE	5 (4)
G14	GIRDER END STIRRUPS	5
G15	GIRDER END STIRRUPS	5
G16	GIRDER TOP TIES	5
G17	GIRDER STIRRUP	5
G18	HEADED BARS	10 STR.

BENDING DIAGRAM (ALL DIMENSIONS ARE OUT TO OUT)

NOTE: FOR DIMENSION "A", SEE "GIRDER SCHEDULE"



FILE NAME P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 - SB11.DWG

TIME 3:31:16 PM

DATE 8/17/2022

PLOTTED BY D. PROCTOR

DESIGNED BY K. HOOPER

ENTERED BY D. PROCTOR

CHECKED BY H. COFFMAN

PROJ. ENGR.

REGIONAL ADM.

REGION NO. 10 STATE WASH

JOB NUMBER 22X344

CONTRACT NO.

LOCATION NO.

FED.AID PROJ.NO.

LOCATION NO.



SEE SHEET CT1

P.E. STAMP BOX

Washington State
Department of TransportationCOFFMAN
ENGINEERS10 N. Post St.
Spokane, WA 99201
ph 509.328.2994
www.coffman.com

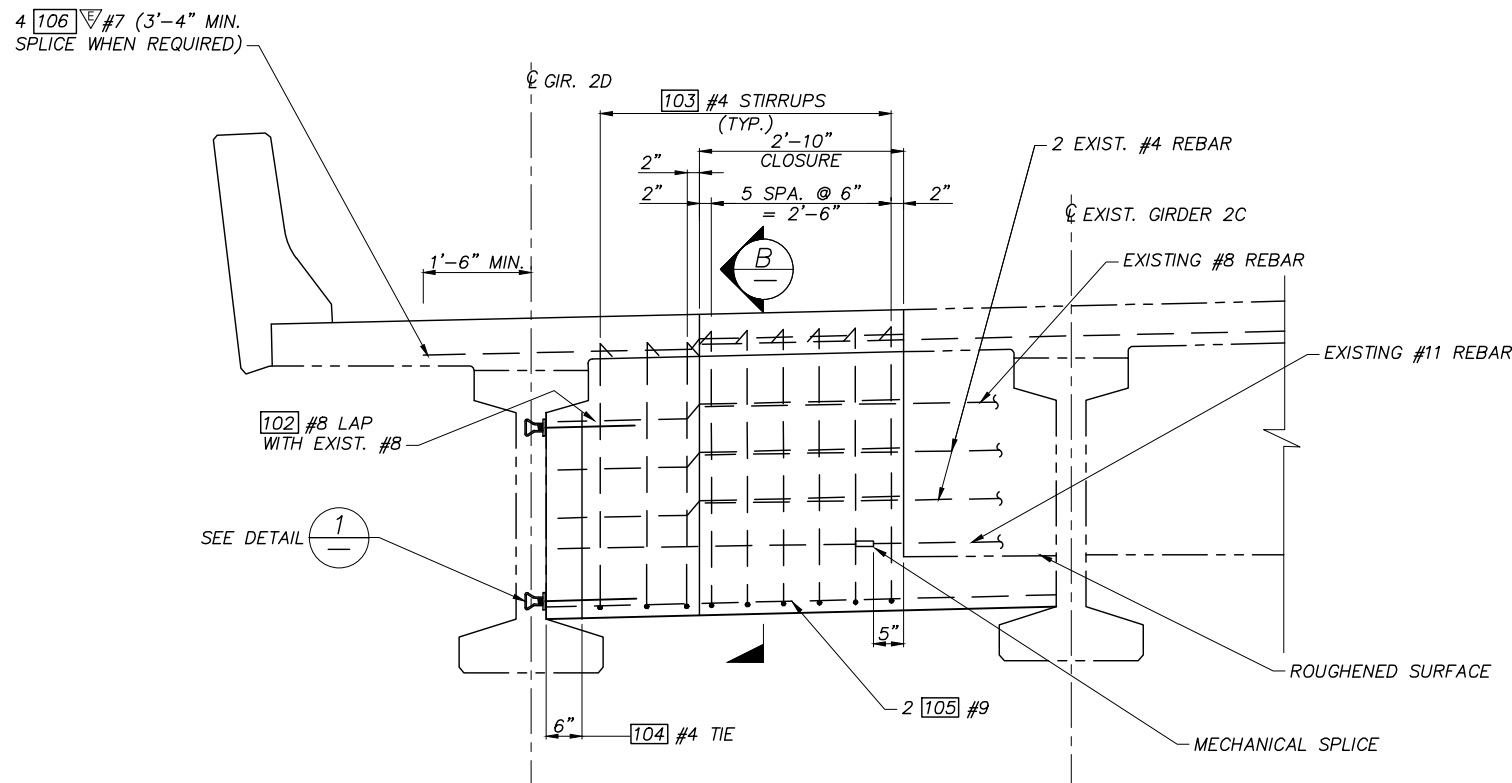
I-5

KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212W50G GIRDER
DETAILS 4 OF 4

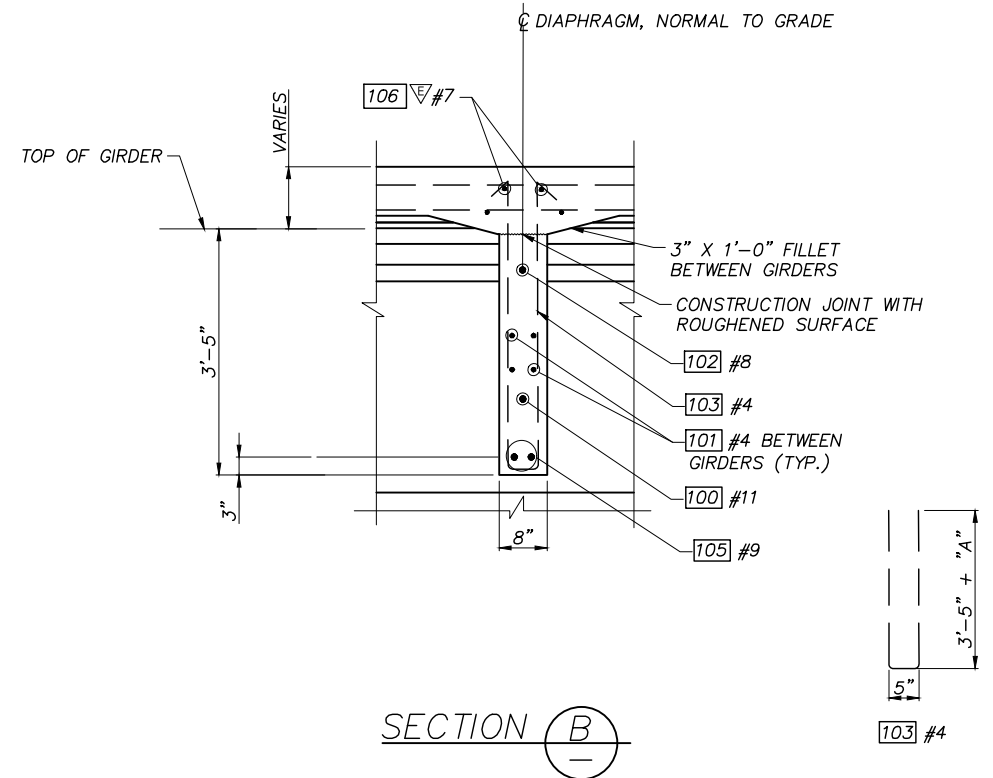
PLAN REF NO.

SB11

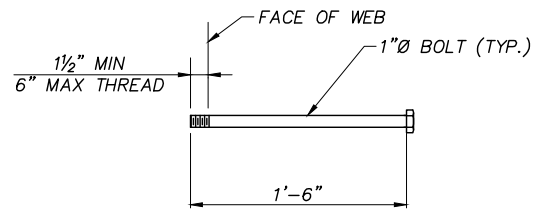
SHEET
20
OF
37
SHEETS



ELEVATION
FULL DEPTH INTERMEDIATE DIAPHRAGM
DIMENSIONS ARE ALONG DIAPHRAGM



SECTION B-B



ANCHOR DETAIL 1
ASTM A307

NOTES:

- GIRDERS SHALL BE HELD RIGIDLY IN PLACE WHEN DIAPHRAGMS ARE PLACED.
- CUT/RELEASE GIRDER TEMPORARY STRANDS BEFORE CASTING DECK OR DIAPHRAGM. SEE TEMPORARY STRAND CUTTING SEQUENCE.
- FOR CONCRETE PLACEMENT PROCEDURE SEE "SUPER STRUCTURE CONSTRUCTION SEQUENCE" SHEET.

FILE NAME	P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 -S12.DWG				REGION NO.	STATE	FED.AID PROJ.NO.	
TIME	3:12:52 PM				10	WASH		
DATE	6/20/2022							
PLOTTED BY	D. PROCTOR							
DESIGNED BY	K. HOOPER							
ENTERED BY	D. PROCTOR							
CHECKED BY	H. COFFMAN							
PROJ. ENGR.								
REGIONAL ADM.					CONTRACT NO.		LOCATION NO.	
	REVISION						DATE	
							BY	



SEE SHEET CT1
DATE

P.E. STAMP BOX

P.E. STAMP BOX



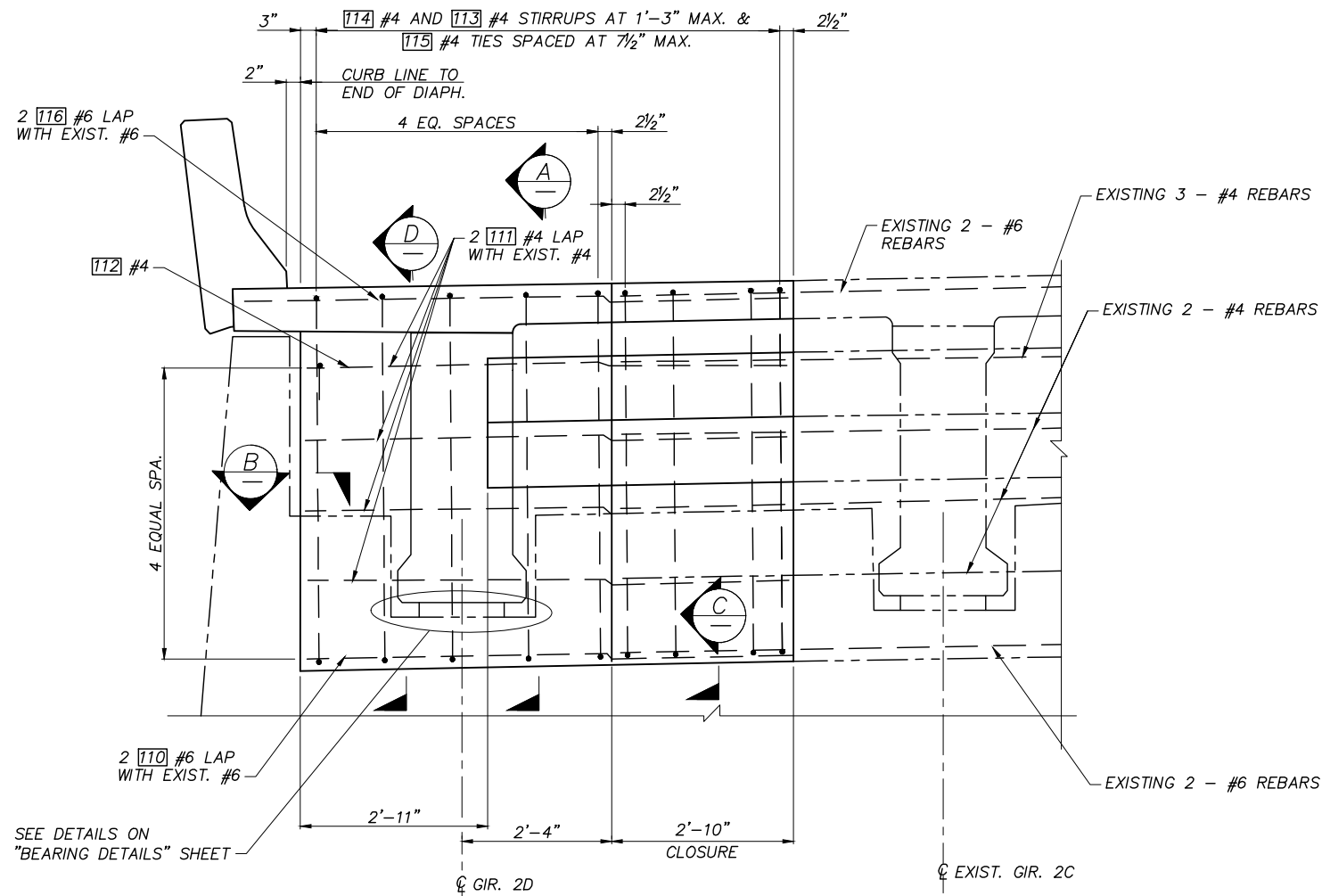
Washington State
Department of Transportation



COFFMAN
ENGINEERS
10 N. Post St.
Spokane, WA 99201
ph 509.328.2994
www.coffman.com

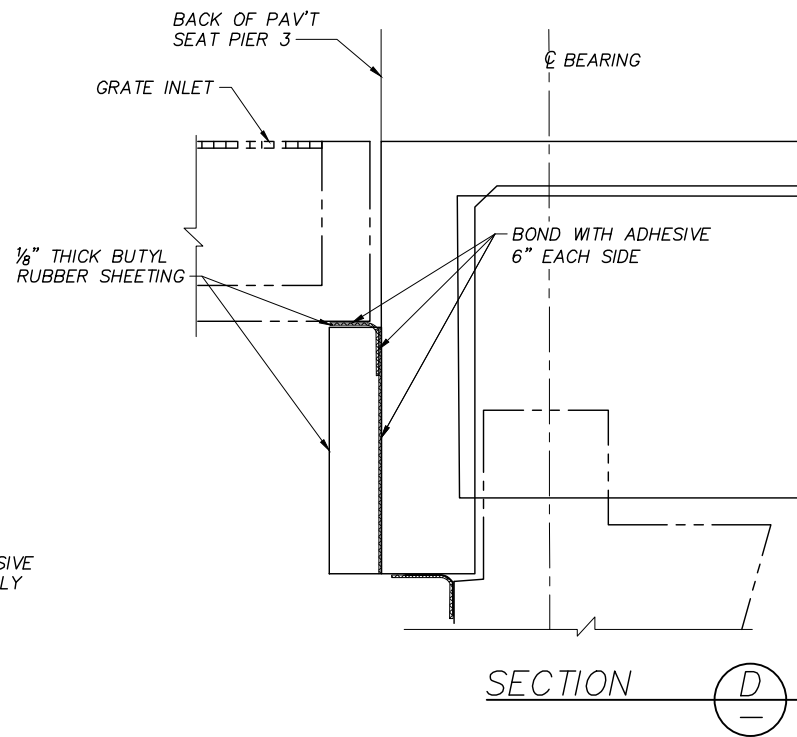
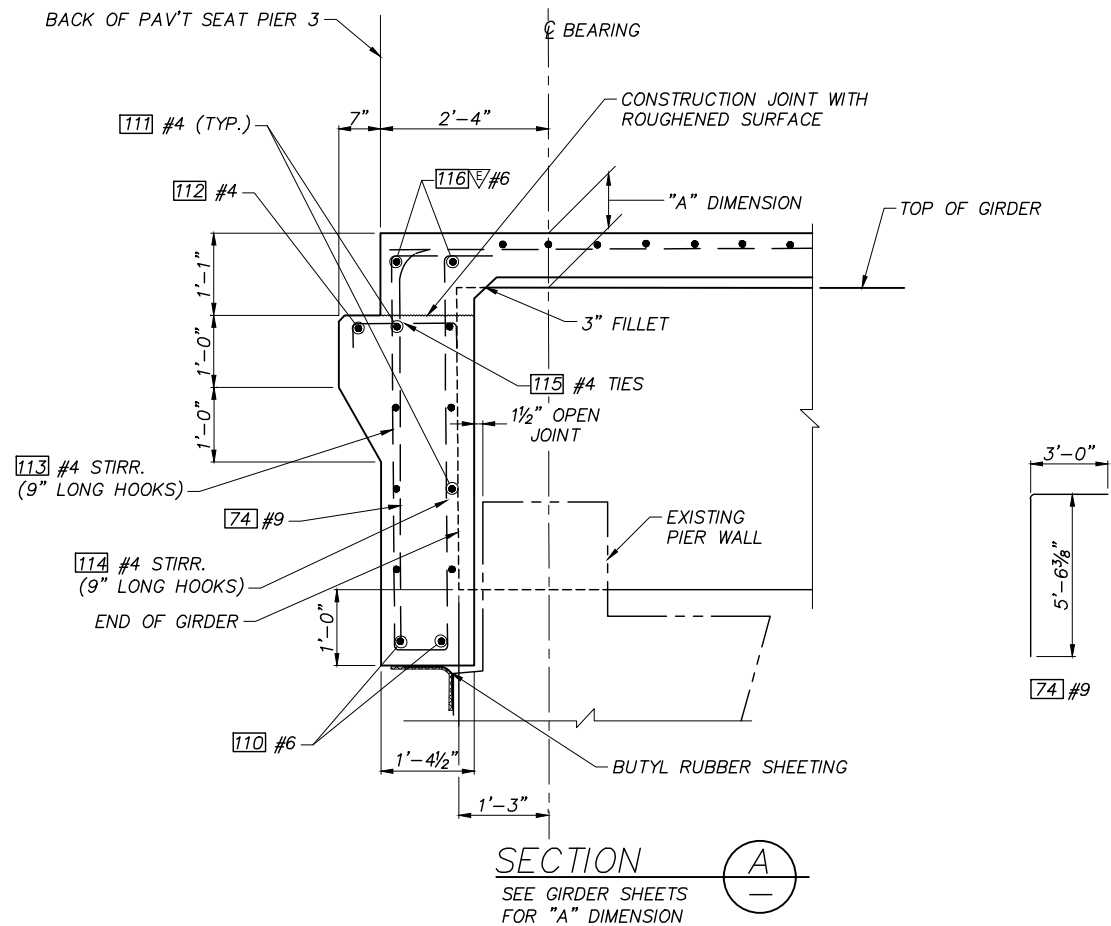
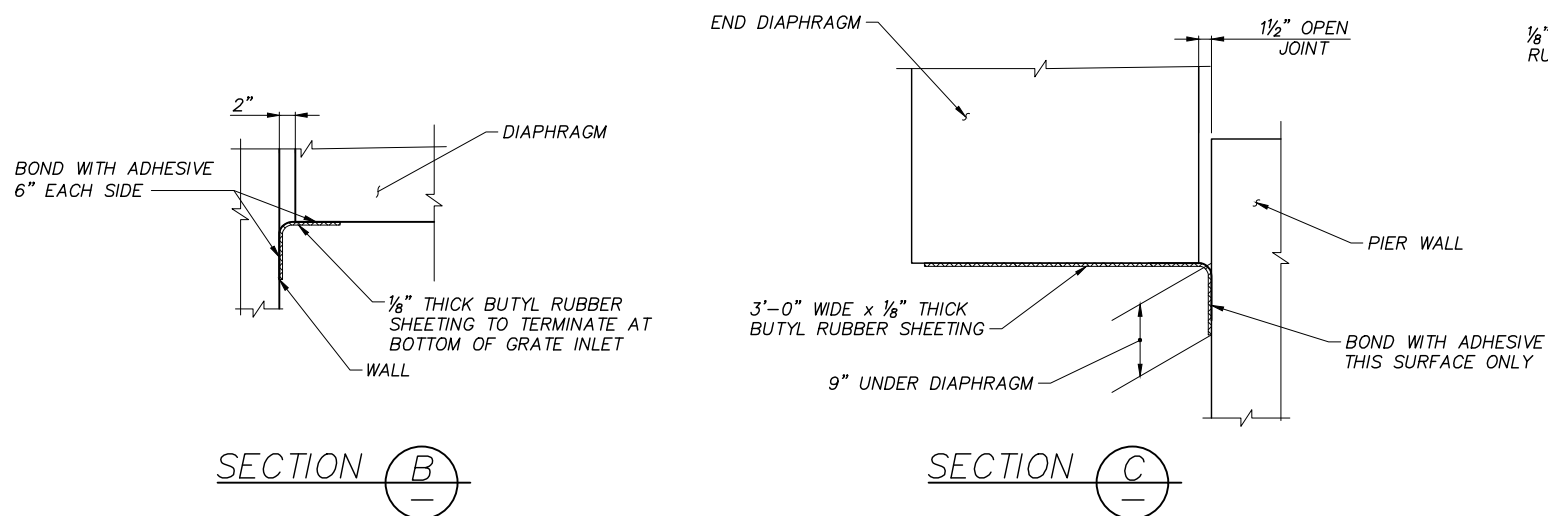
I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212
INTERMEDIATE DIAPHRAGM DETAILS

PLAN REF NO.
SB12
SHEET
21
OF
37
SHEETS



END DIAPHRAGM ELEVATION

GRATE INLET NOT SHOWN FOR CLARITY



NOTES:

1. GIRDERS SHALL BE HELD RIGIDLY IN PLACE WHEN DIAPHRAGMS ARE PLACED.
2. CUT/RELEASE GIRDER TEMPORARY STRANDED BEFORE CASTING DECK OR DIAPHRAGM. SEE TEMPORARY STRAND CUTTING SEQUENCE.
3. EXTENDED STRANDS AND GIRDER REINFORCING NOT SHOWN FOR CLARITY.

FILE NAME	P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 -S13.DWG
TIME	6:11:56 PM
DATE	6/7/2022
PLOTTED BY	D. PROCTOR
DESIGNED BY	K. HOOPER
ENTERED BY	D. PROCTOR
CHECKED BY	H. COFFMAN
PROJ. ENGR.	
REGIONAL ADM.	
REVISION	
DATE	
BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
22X344		
CONTRACT NO.		LOCATION NO.



SEE SHEET CTL
DATE

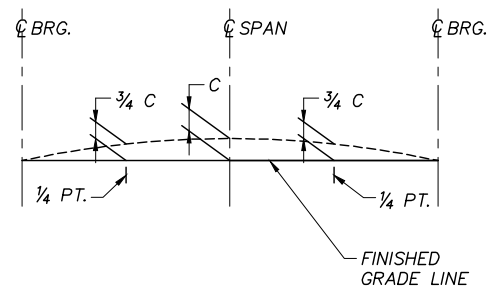
P.E. STAMP BOX



I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212




END DIAPHRAGM DETAILS

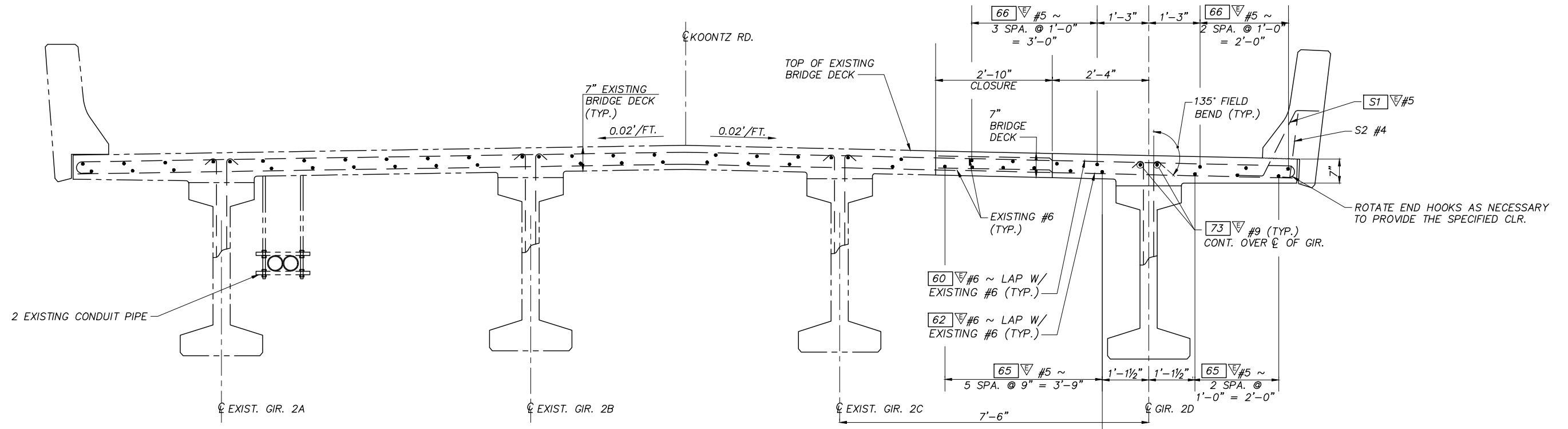
PLAN REF NO.	SB13
SHEET	22
OF	37
SHEETS	



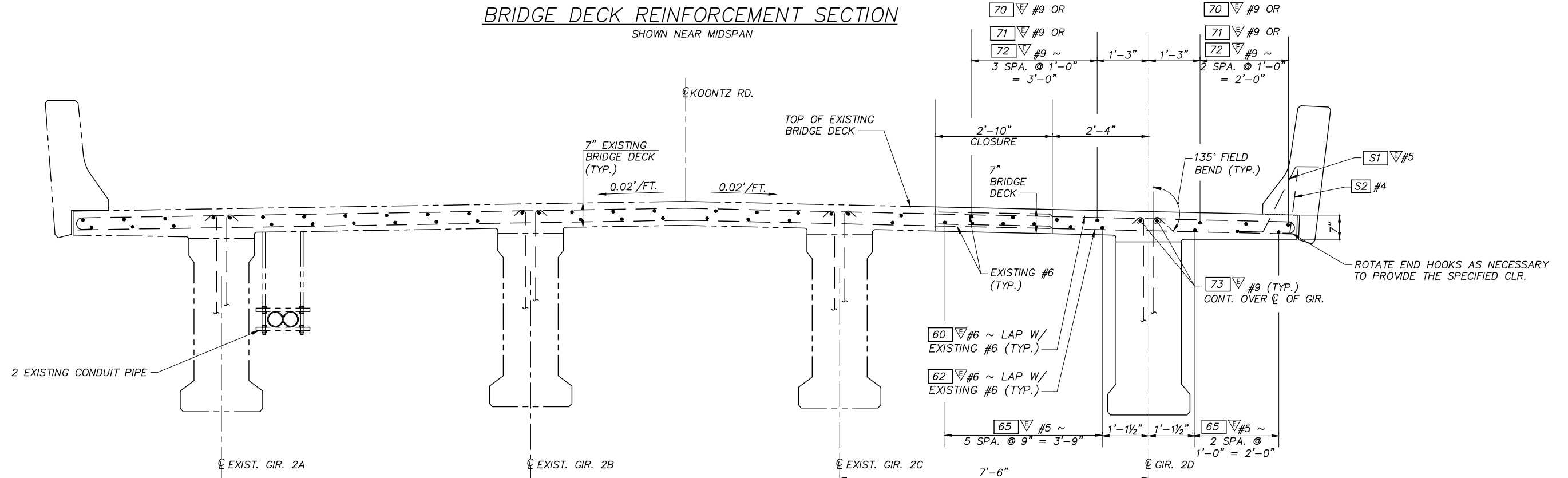
BRIDGE DECK REINFORCEMENT PLAN

DETAIL 1
—

FILE NAME P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\S\220783 -SB14.DWG						 Washington State Department of Transportation		I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR KOONTZ RD OVER I-5 BRIDGE NO. 5/212		PLAN REF NO.
TIME 8:46:00 AM			REGION NO. 10							STATE WASH
DATE 6/9/2022			JOB NUMBER 22X344		CONTRACT NO.	LOCATION NO.	 COFFMAN ENGINEERS 10 N. Post St. Spokane, WA 99201 ph 509.328.2994 www.coffman.com		SHEET 23	
PLOTTED BY D. PROCTOR									SHEET OF 37	
DESIGNED BY K. HOOPER									SHEETS	
ENTERED BY D. PROCTOR										
CHECKED BY H. COFFMAN							BRIDGE DECK REINFORCEMENT PLAN			
PROJ. ENGR.										
REGIONAL ADM.		REVISION	DATE	BY						






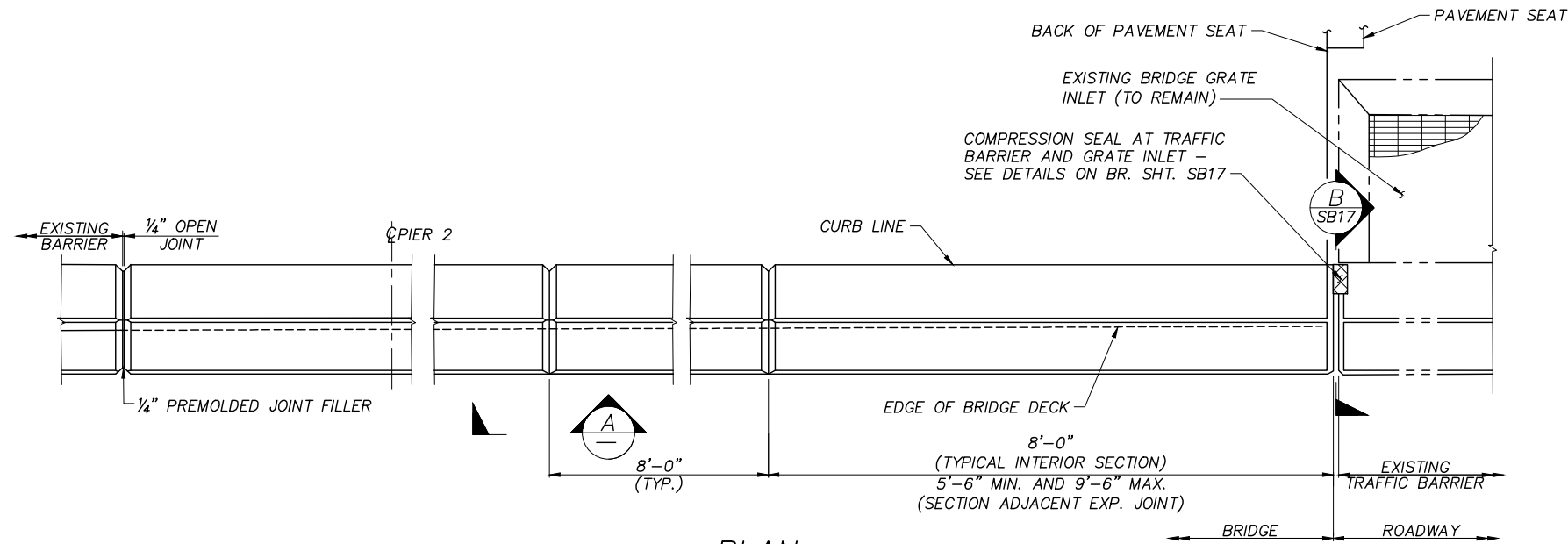
BRIDGE DECK REINFORCEMENT SECTION
SHOWN NEAR MIDSPAN



BRIDGE DECK REINFORCEMENT SECTION
SHOWN NEAR PIER 2

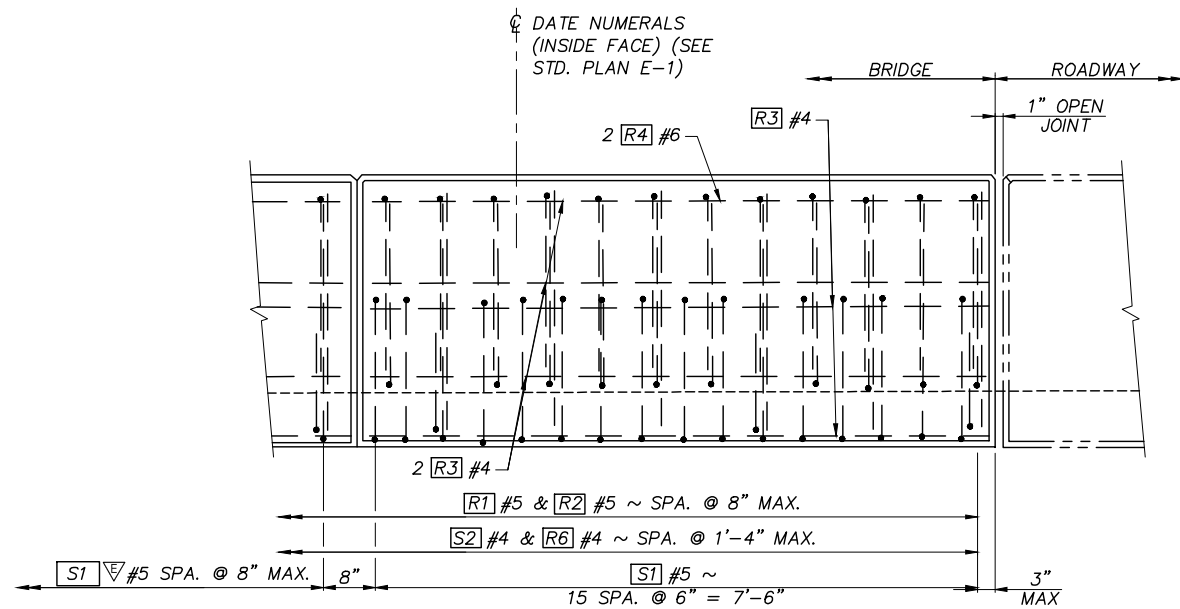
SR5 L-5 JOB NO. SB15 SHEET

FILE NAME P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 - SB15.DWG										 SEE SHEET CT1 DATE	P.E. STAMP BOX	 Washington State Department of Transportation  COFFMAN ENGINEERS 10 N. Post St. Spokane, WA 99201 ph 509.328.2994 www.coffman.com	I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR KOONTZ RD OVER I-5 BRIDGE NO. 5/212 BRIDGE DECK REINFORCEMENT SECTION	PLAN REF NO.
TIME 1:37:11 PM				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.	SB15							
DATE 6/20/2022				JOB NUMBER 22X344			SHEET 24							
PLOTTED BY D. PROCTOR				CONTRACT NO.		LOCATION NO.	OF 37							
DESIGNED BY K. HOOPER							SHEETS							
ENTERED BY D. PROCTOR														
CHECKED BY H. COFFMAN														
PROJ. ENGR.														
REGIONAL ADM.														
	REVISION		DATE	BY										

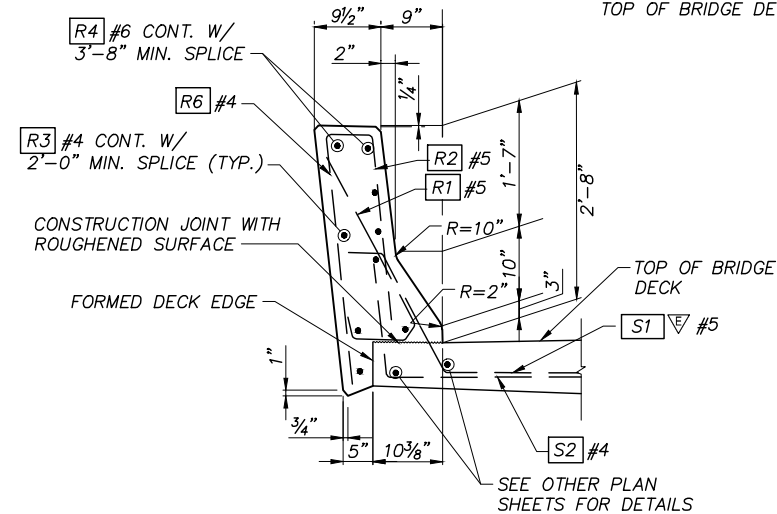


**PLAN
TRAFFIC BARRIER**

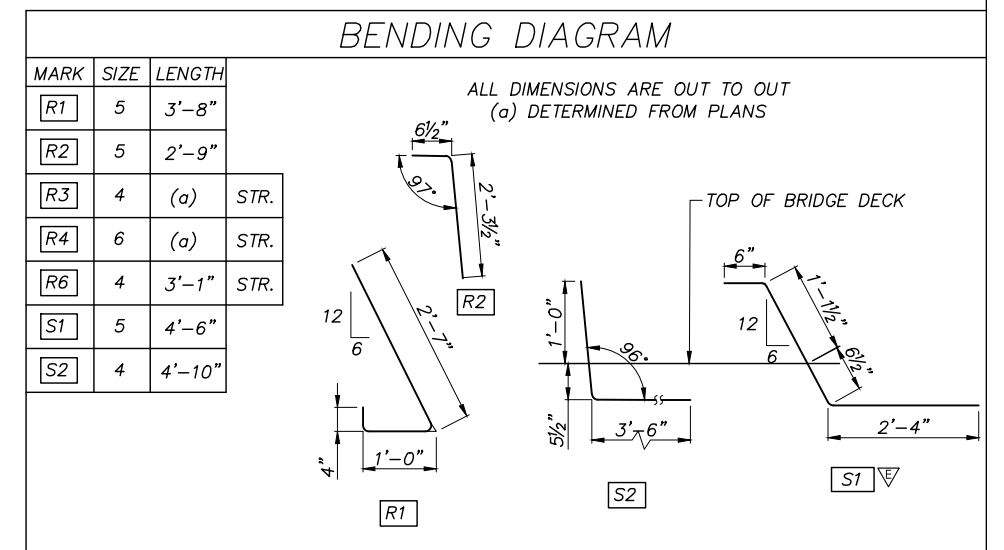
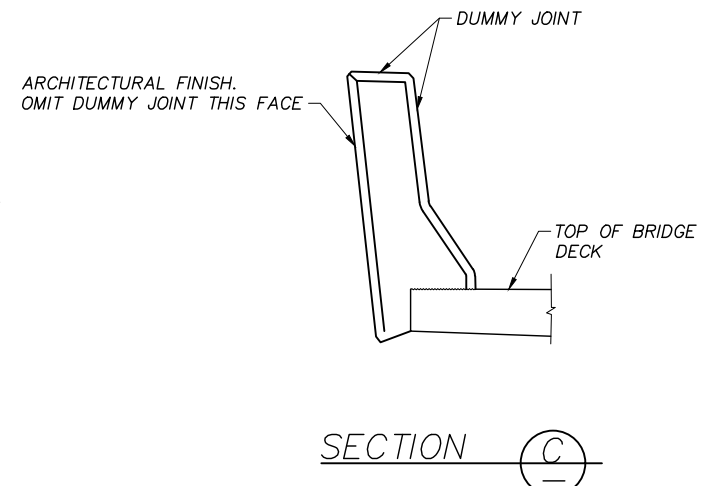
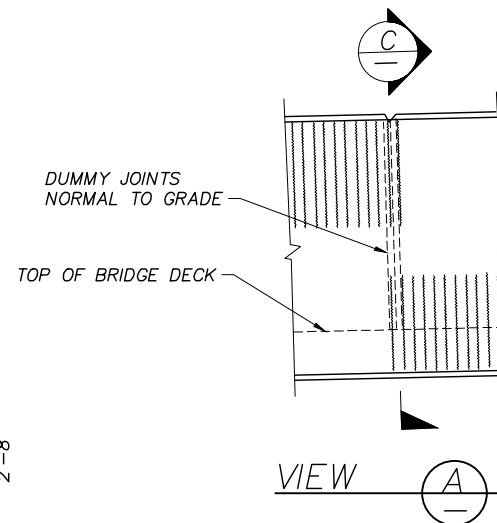
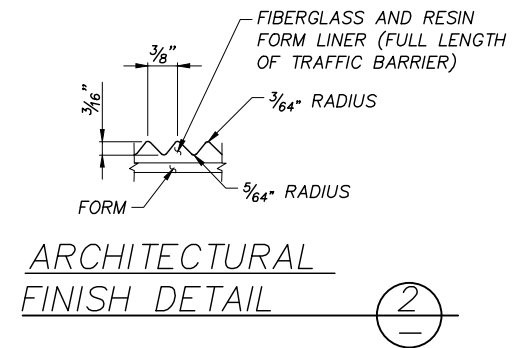
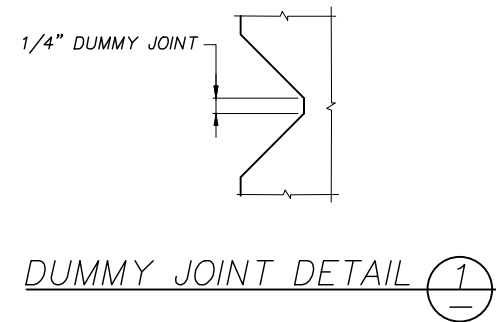
BARRIER CONTINUOUS BETWEEN BRIDGE DECK EXPANSION JOINTS. CONSTRUCTION JOINTS WITH SHEAR KEYS ARE PERMISSIBLE AT DUMMY JOINT LOCATIONS. FORM JOINTS BETWEEN DUMMY JOINTS SHALL NOT BE PERMITTED.



**OUTSIDE ELEVATION END
OF TRAFFIC BARRIER**

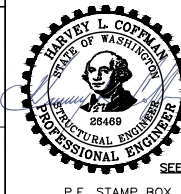


**TYPICAL SECTION
TRAFFIC BARRIER**



SR5 L-5 JOB NO. SHEET SB16

FILE NAME	P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 - SB16.DWG				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	3:14:52 PM				10	WASH	
DATE	6/10/2022						
PLOTTED BY	D. PROCTOR				JOB NUMBER		
DESIGNED BY	K. HOOPER				22X344		
ENTERED BY	D. PROCTOR				CONTRACT NO.		
CHECKED BY	H. COFFMAN				LOCATION NO.		
PROJ. ENGR.							
REGIONAL ADM.							
	REVISION		DATE	BY			



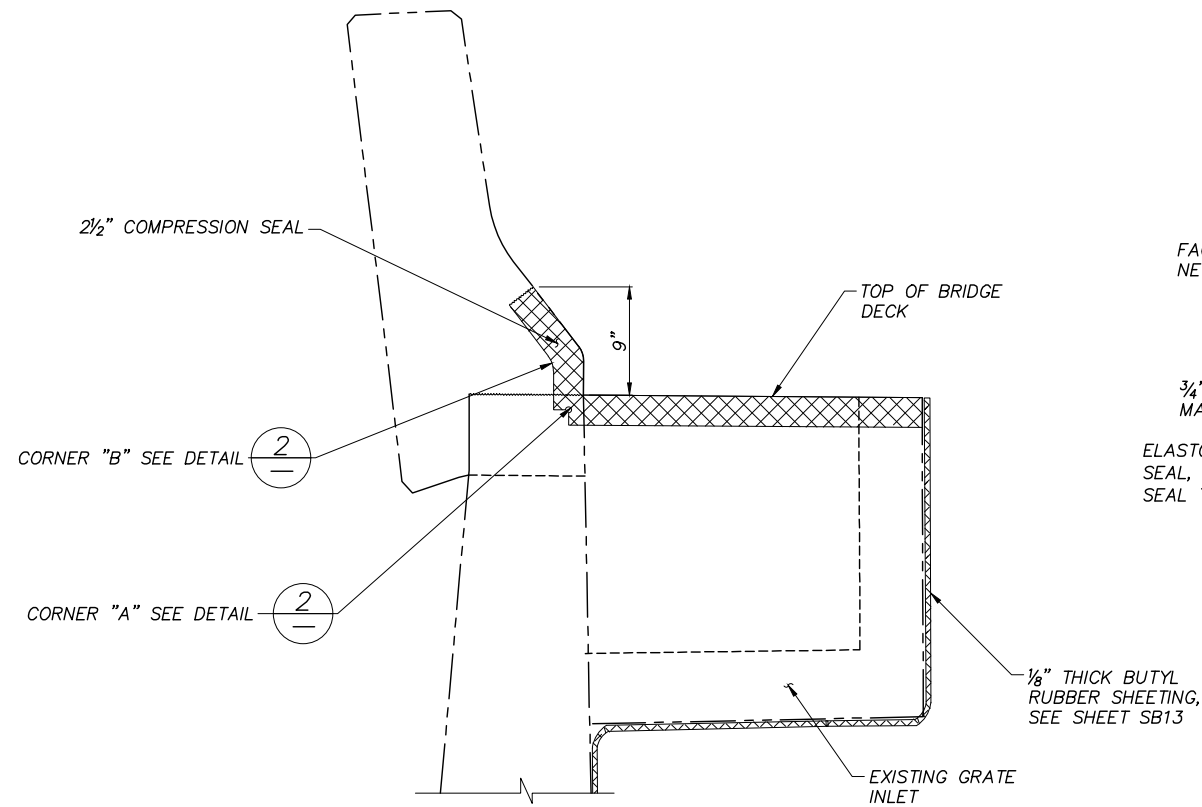
SEE SHEET CT1
DATE

P.E. STAMP BOX

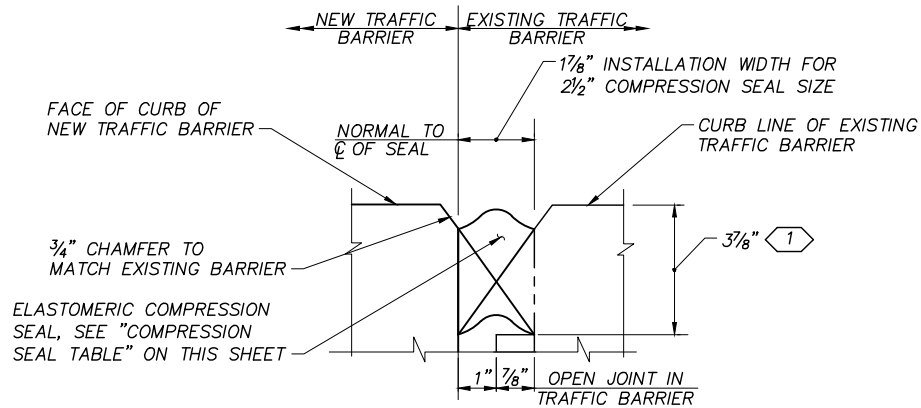


I-5
KOONTZ ROAD BRIDGE
EMERGENCY BRIDGE REPAIR
KOONTZ RD OVER I-5 BRIDGE NO. 5/212
TRAFFIC BARRIER
SHEET 1 OF 2

PLAN REF NO.
SB16
SHEET
25
OF
37
SHEETS

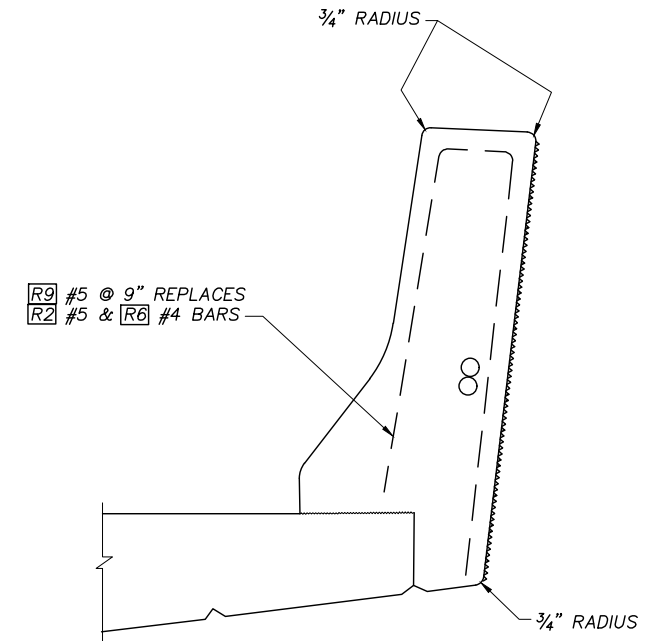


SECTION B
SB16



COMPRESSION SEAL DETAIL 1
EXPANSION JOINT AT BACK OF PAVEMENT SEAT

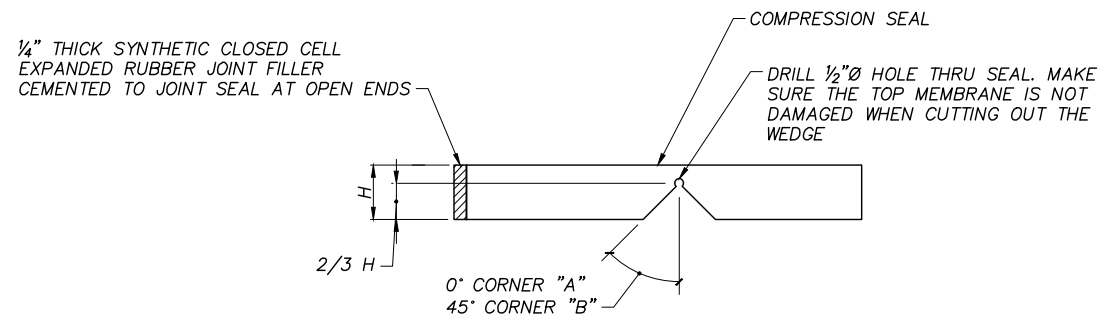
1 SEAL HEIGHT VARIES WITH MANUFACTURER. VERIFY PRIOR TO BRIDGE DECK CONSTRUCTION.



SLIPFORM
ALTERNATE

SEE SECTION D/SB16 FOR ADDITIONAL DETAILS.

THE CONTRACTOR IS ADVISED THAT THE SLIPFORM CONSTRUCTION METHOD IS A PATENTED PROPRIETARY PROCESS FOR BARRIER WITH A ARCHITECTURAL FINISH.



SEAL CUTTING DETAIL 2

D.S. BROWN		WATSON BOWMAN ACME	
SEAL	WIDTH	SEAL	WIDTH
CV-2502	2 1/2	WA-250	2 1/2

TESTING SHALL BE PER ASTM D 2628 PRIOR TO USE.

COMPRESSION SEAL TABLE

SR5 L-5 JOB NO. SB17 SHEET

FILE NAME P:\SPO\22JOBS\220783 BRIDGE 5-212 GIRDER REPLACEMENT\0.0 DWGS\220783 - SB17.DWG				REGION NO. 10 STATE WASH		FED.AID PROJ.NO.			SEE SHEET CT1 DATE	P.E. STAMP BOX			10 N. Post St. Spokane, WA 99201 ph 509.328.2994 www.coffman.com	I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR KOONTZ RD OVER I-5 BRIDGE NO. 5/212		PLAN REF NO. SB17
TIME 3:16:47 PM				JOB NUMBER 22X344		LOCATION NO.								SHEET 26		
DATE 6/10/2022				CONTRACT NO.										OF 37		
PLOTTED BY D. PROCTOR														SHEETS		
DESIGNED BY K. HOOPER																
ENTERED BY D. PROCTOR																
CHECKED BY H. COFFMAN																
PROJ. ENGR.																
REGIONAL ADM.				REVISION		DATE		BY								

L = Lump sum quantity.
T = Transverse or
S = Seismic

E = Bar is to be epoxy coated.

V = Bar dimensions vary between dimensions
shown on this line and the following line.

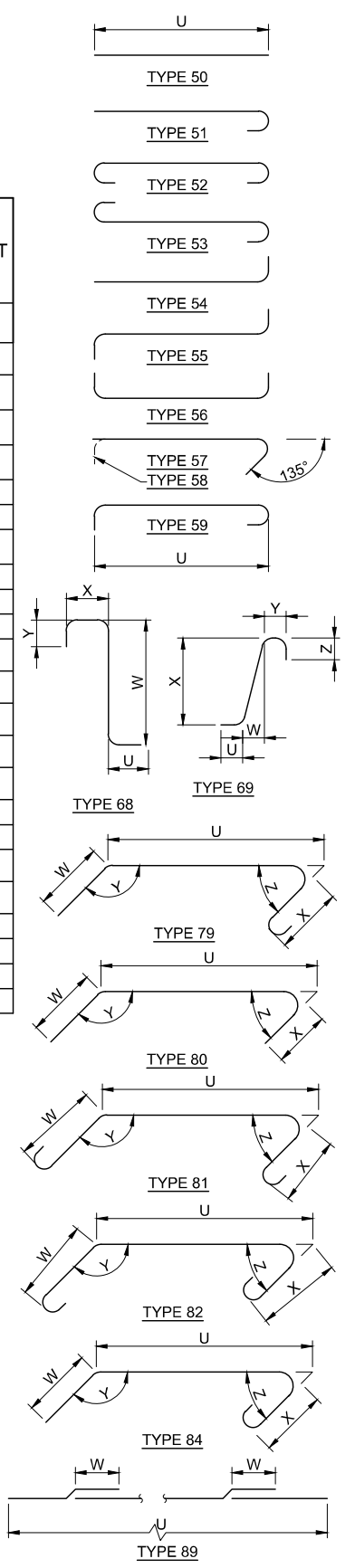
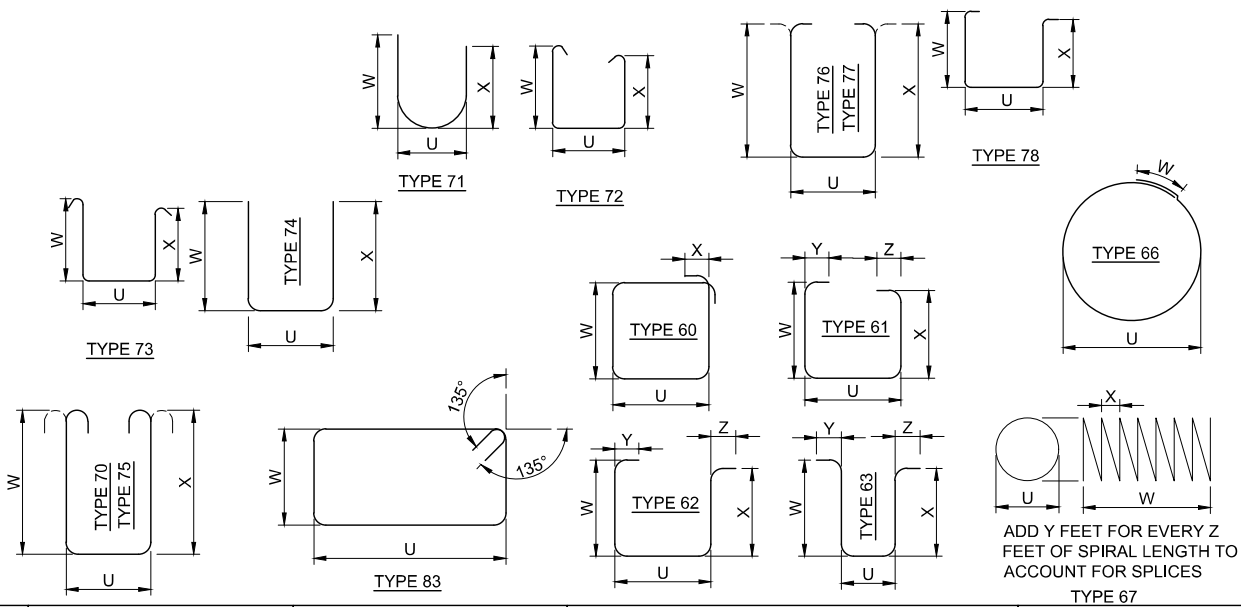
MARK NO.	LOCATION	SIZE	NO. REQD	BEND TYPE	TIE OR STIR.	LUMP SUM	EPOXY COAT	VARIES	NO. EACH	DIMENSIONS (Out to Out)												LENGTH		WEIGHT		
										U		W		X		Y		Z		Î ₁	Î ₂					
										FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	DEG.	DEG.	FT.	IN.		LBS.	
	BRIDGE DECK																									
S1	Barrier to Deck Connection	5	133	69			E			2	4.0	0	9.0	1	6.0	0	6.0	0	0.0			4	5.0	609		
S2	Barrier to Deck Connection	4	63	80						1	6.0	3	6.0	0	0.0	0	3.0	0	0.0	97	0	4	11.0	206		
60	Transverse Top Mat	6	123	50			E			8	8.0										8	8.0	1599			
62	Transverse Bottom Mat	6	120	50			E			8	8.0										8	8.0	1560			
65	Bottom Mat Long.	5	9	89			E			85	4.0	2	6.0								87	10.0	824			
66	Top Mat Long.	5	3	50			E			55	4.0										55	4.0	173			
66	Top Mat Long.	5	4	89			E	V	2	72	11.0	2	6.0								75	5.0	303			
										67	5.0	2	6.0								69	11.0				
70	Top Mat Over Pier 2	9	2	50			E			15	1.0										15	1.0	103			
71	Top Mat Over Pier 2	9	2	50			E			20	7.0										20	7.0	140			
72	Top Mat Over Pier 2	9	3	50			E			32	7.0										32	7.0	332			
73	Top Mat Over CL of Girder	9	2	89			E			85	5.0	5	0.0								90	5.0	615			
74	End Diaphragm Connection	9	2	74			E			5	6.0	3	0.0	0	0.0						8	3.0	56			
	END DIAPHRAGM																									
110	End Diaphragm Bottom	6	2	50						7	8.0										7	8.0	23			
111	End Diaphragm Long.	4	8	50						7	8.0										7	8.0	41			
112	End Diaphragm Long.	4	1	50						7	8.0										7	8.0	5			
113	Stirrups	4	9	74	T					5	7.0	0	9.0	0	9.0						6	11.0	42			
114	Stirrups	4	9	80	T					0	9.0	5	7.0	0	9.0	0	3.0	0	3.0	270	90	6	10.0	41		
115	Top Ties	4	13	56	T					1	6.0										2	1.0	18			
116	End Diaphragm Top	6	2	56			E			8	8.0										10	4.0	31			

L = Lump sum quantity.
T = Transverse or
S = Seismic

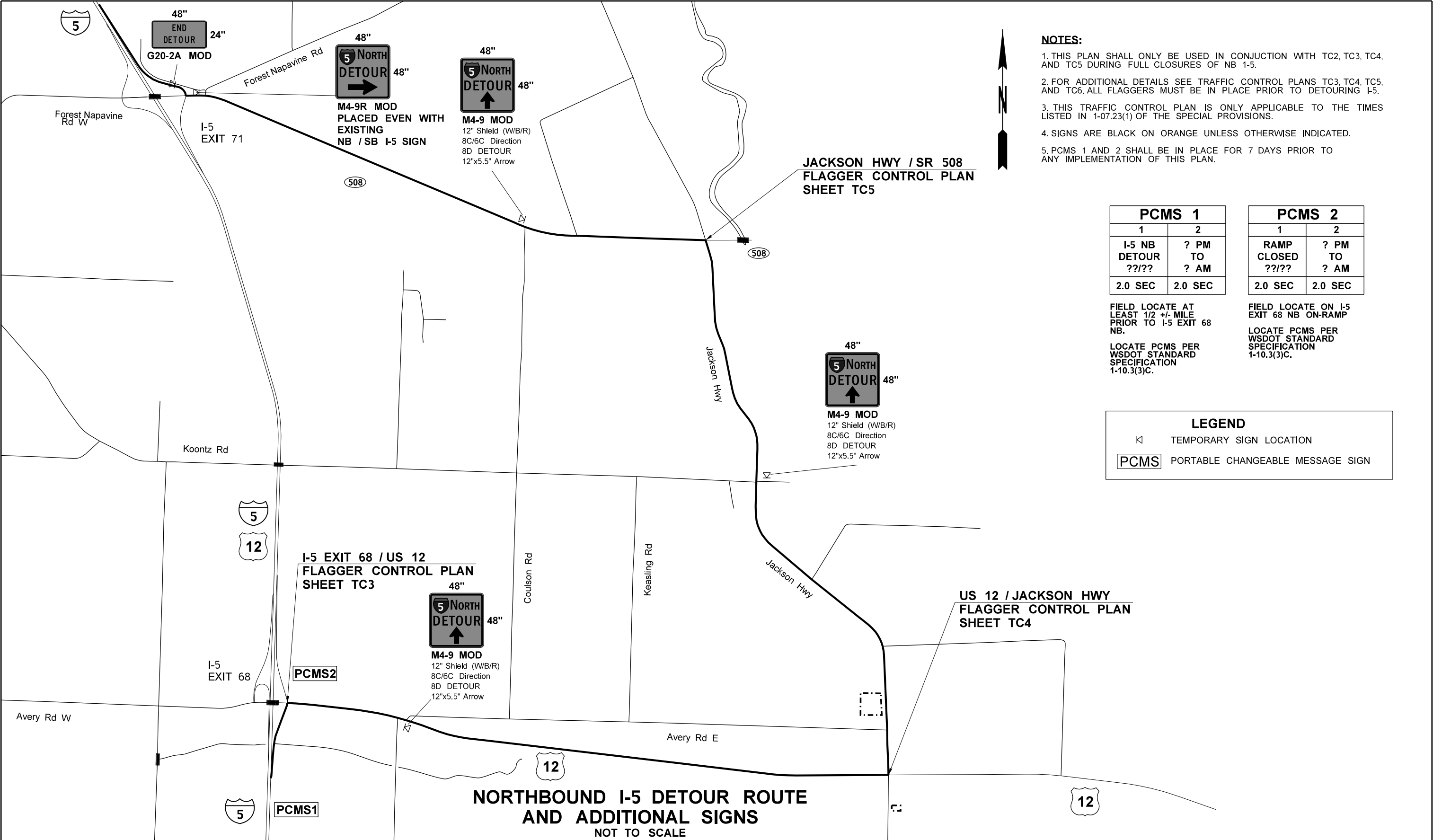
E = Bar is to be epoxy coated.

V = Bar dimensions vary between dimensions
shown on this line and the following line.

MARK NO.	LOCATION	SIZE	NO. REQD	BEND TYPE	TIE OR STIR.	LUMP SUM	EPOXY COAT	VARIES	NO. EACH	DIMENSIONS (Out to Out)												LENGTH		WEIGHT	
																						FT.	IN.		
										U		W		X		Y		Z		Î ₁	Î ₂				
										FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	DEG.	DEG.	FT.	IN.	LBS.			
	INTERMEDIATE DIAPHRAGM																								
100	Intermediate Diaphragm Bot.	11	1	50						4	6.0									4	6.0	24			
101	Intermediate Diaphragm Long.	4	4	50						4	10.0									4	10.0	13			
102	Intermediate Diaphragm Long.	8	1	50						4	10.0									4	10.0	13			
103	Stirrups	4	9	72	T					0	5.0	4	2.0	4	2.0					9	3.0	56			
104	Stirrups	4	1	71	T					0	5.0	2	8.0	2	8.0					5	6.0	4			
105	Intermediate Diaphragm Bot.	9	2	50						6	11.0									6	11.0	47			
106	Diaphragm Connection	7	4	56			E			6	4.0									8	4.0	68			
	TRAFFIC BARRIER																								
R1	Transverse Bot. Contain. Bar	5	131	80						1	0.0	2	7.0	0	4.0	0	3.0	0	3.0	63	90	3	5.0	472	
R2	Transverse Top Contain. Bar	5	131	79						2	3.0	0	7.0	0	0.0	0	3.0	0	0.0	97	0	2	8.0	370	
R3	Barrier Middle Long.	4	7	89						86	9.0	2	0.0								90	9.0	424		
R4	Barrier Top Long.	6	2	89						86	9.0	3	8.0								90	5.0	272		
R6	Barrier Transverse Vertical	4	63	50						3	1.0										3	1.0	130		
	PLATE CONNECTION																								
170	Pier 2 Plate Connection	4	3	50						0	6.0										0	6.0	1		
171	Pier 2 Plate Connection	4	4	74						1	5.0	1	0.0	1	0.0						3	2.0	8		
	FASCIA WALL																								
177	Fascia Wall Horizontal	4	4	50						4	11.0										4	11.0	13		
178	Fascia Wall Horizontal	4	4	50						4	11.0										4	11.0	13		



- NOTES:
- SEE PLANS FOR REINFORCEMENT NOT SHOWN.
 - BEND FOR TRANSVERSE BARS DUE TO ROADWAY CROWN CONDITIONS HAS NOT BEEN SHOWN. THESE BARS SHALL BE BENT AS REQUIRED TO CONFORM TO THE CONFIGURATION OF THE STRUCTURE.
 - BARLIST IS FOR QUANTITY ESTIMATION ONLY. REINFORCEMENT FABRICATION DETAILS SHALL BE DETERMINED FROM PLANS.



- NOTES:**
- 1. THIS PLAN SHALL ONLY BE USED IN CONJUNCTION WITH TC2, TC3, TC4, AND TC5 DURING FULL CLOSURES OF NB 1-5.
 - 2. FOR ADDITIONAL DETAILS SEE TRAFFIC CONTROL PLANS TC3, TC4, TC5, AND TC6. ALL FLAGGERS MUST BE IN PLACE PRIOR TO DETOURING I-5.
 - 3. THIS TRAFFIC CONTROL PLAN IS ONLY APPLICABLE TO THE TIMES LISTED IN 1-07.23(1) OF THE SPECIAL PROVISIONS.
 - 4. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
 - 5. PCMS 1 AND 2 SHALL BE IN PLACE FOR 7 DAYS PRIOR TO ANY IMPLEMENTATION OF THIS PLAN.

PCMS 1		PCMS 2	
1	2	1	2
I-5 NB DETOUR ??/??	? PM TO ? AM	RAMP CLOSED ??/??	? PM TO ? AM
2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC

FIELD LOCATE AT
LEAST 1/2 +/- MILE
PRIOR TO I-5 EXIT 68
NB.

LOCATE PCMS PER
WSDOT STANDARD
SPECIFICATION
1-10.3(3)C.


FIELD LOCATE ON I-5
EXIT 68 NB ON-RAMP

LOCATE PCMS PER
WSDOT STANDARD
SPECIFICATION
1-10.3(3)C.

LEGEND

 TEMPORARY SIGN LOCATION

 PORTABLE CHANGEABLE MESSAGE SIGN

FILE NAMEG:\444307\03-Design\Design\I-5\I-5 Koontz Road bridge repair\18 CAD\XL6514_PS_TC.dgn				REGION NO.10STATEWASH		FED.AID PROJ.NO.ER-2C02001-2						I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR		Plot 3 PLAN REF NO TC1	
TIME11:13:10 AM														SHEET 29 OF 37 SHEETS	
DATE11/28/2022															
PLOTTED BYecklunk															
DESIGNED BYR. GEIST															
ENTERED BYR. GEIST															
CHECKED BYR. SMITH															
PROJ. ENGR.P. MASON															
REGIONAL ADM.C. FRANCIS		REVISION		DATE		BY		CONTRACT NO.		LOCATION NO.					
												TRAFFIC CONTROL PLAN			
										P.E. STAMP BOX		DATE			
												P.E. STAMP BOX		DATE	

PCMS 1	
1	2
SLOW TRAFFIC AHEAD	NEXT # MILES
2.0 SEC	2.0 SEC

FIELD LOCATE AT
LEAST 1/2 +/- MILE IN
ADVANCE OF PCMS 2.

RELOCATE AS NEEDED
TO REMAIN 1 +/- MILE
IN ADVANCE OF QUEUE.

PCMS MAY BE TRUCK MOUNTED; IF SO, THE THREE TRANSVERSE DRUMS ARE OPTIONAL.

REMOVE WHEN QUEUE
NO LONGER PRESENT.

= APPROXIMATE
QUEUE LENGTH
ROUNDED UP TO
NEAREST MILE

LOCATE PCMS PER
WSDOT STANDARD
SPECIFICATION
1-10.3(3)C.

PCMS 2	
1	2
LEFT LANE CLOSED	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1/4 +/-
MILE IN ADVANCE OF
W20-1 SIGN.

LOCATE PCMS PER
WSDOT STANDARD
SPECIFICATION
1-10.3(3)C.

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50-75	40	80

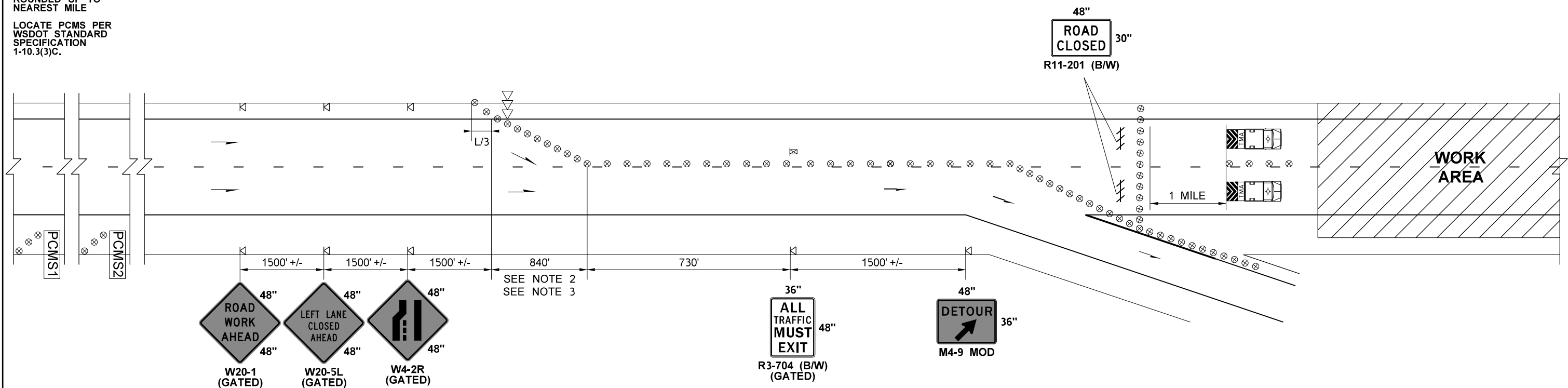
SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	50-75 MPH	1500' +/-
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.		
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		

MINIMUM LANE CLOSURE TAPER LENGTH = L							
LANE WIDTH (feet)	SPEED (MPH)	50	55	60	65	70	75
12	L (feet)	600	660	720	780	840	900








MINIMUM SHOULDER CLOSURE TAPER LENGTH = L/3							
SHOULDER WIDTH (feet)	SPEED (MPH)	50	55	60	65	70	75
6	L/3 (feet)	120	120	120	160	160	160
10	L/3 (feet)	200	200	200	240	240	280

USE A MINIMUM 3 DEVICES FOR SHOULDER LESS THAN 6'.

MINIMUM LONGITUDINAL BUFFER SPACE = B						
SPEED (MPH)	50	55	60	65	70	75
LENGTH (feet)	425	495	570	645	730	820
STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R						
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.			HOST VEHICLE WEIGHT > 22,000 lbs.			
50-55 MPH	60+ MPH		50-55 MPH	60+ MPH		
123'	172'		100'	150'		



LEGEND

- | | |
|---|--|
|  | TEMPORARY SIGN LOCATION |
|  | TEMPORARY SIGN LOCATION
(MIN. 5' MOUNTING HEIGHT) |
|  | TRAFFIC SAFETY DRUM |
|  | SEQUENTIAL ARROW SIGN |
|  | BARRICADE TYPE 3 |
|  | TRANSPORTABLE ATTENUATOR |
|  | PORTABLE CHANGEABLE MESSAGE SIGN |

NOTES:

1. IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN LIMITS OF HORIZONTAL CURVES.
2. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
3. THIS TRAFFIC CONTROL PLAN IS ONLY APPLICABLE TO THE TIMES LISTED IN 1-07.23(1) OF THE SPECIAL PROVISIONS.
4. TC1, TC3, TC4, AND TC5 MUST ALSO BE IMPLEMENTED DURING THE USE OF THIS TRAFFIC CONTROL PLAN.

NORTHBOUND I-5 CLOSURE
NOT TO SCALE

[illegible]

LEGEND

K

TEMPORARY SIGN LOCATION

⊗

TRAFFIC SAFETY DRUM

⊠

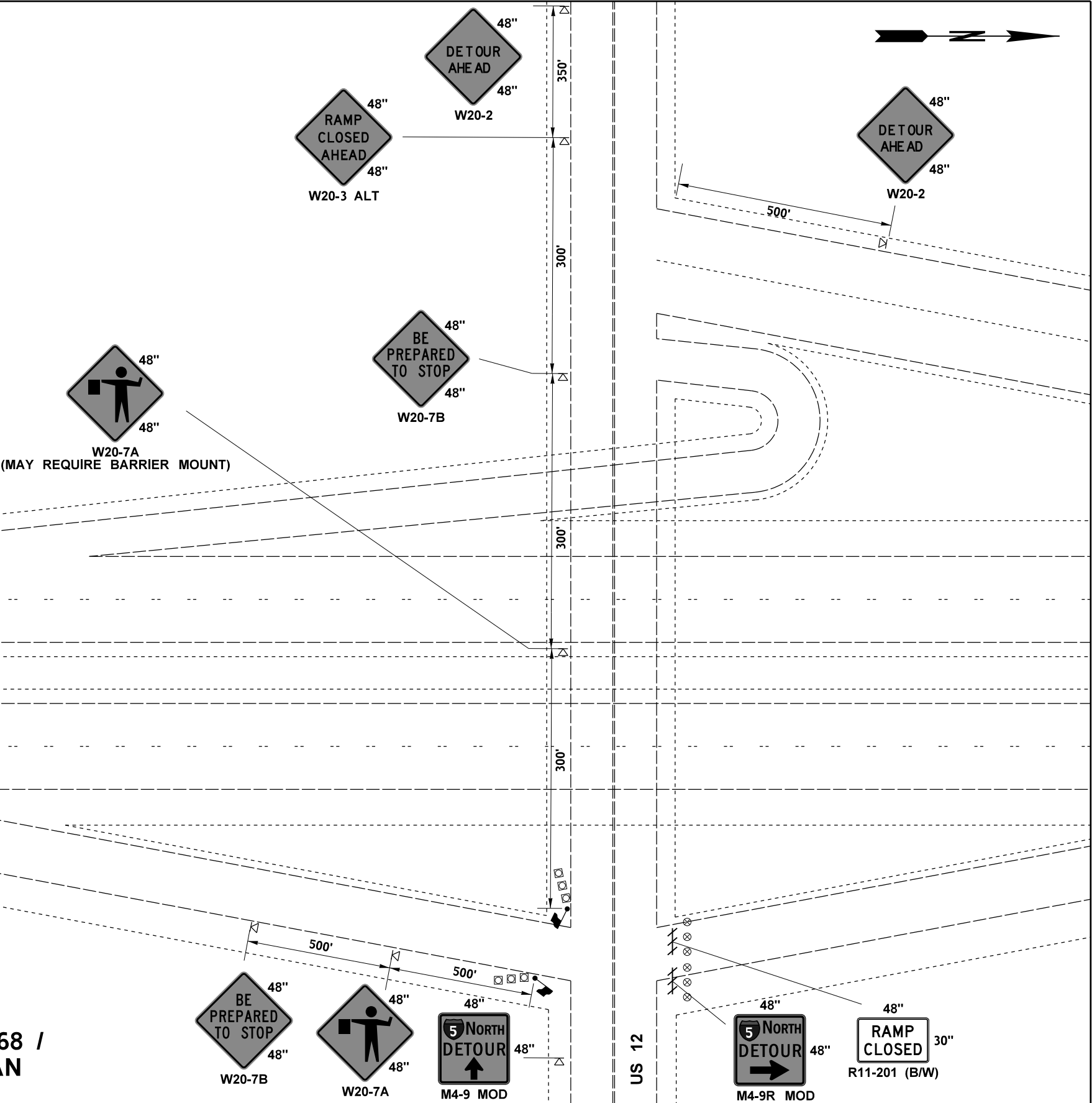
TRAFFIC SAFETY CONE

⚡

BARRICADE TYPE 3

🚧

FLAGGER STATION



NOTES:

1. THIS PLAN SHALL ONLY BE USED IN CONJUNCTION WITH TC1, TC2, TC4, AND TC5 DURING FULL CLOSURES OF NB 1-5.
2. THIS TRAFFIC CONTROL PLAN IS ONLY APPLICABLE TO THE TIMES LISTED IN 1-07.23(1) OF THE SPECIAL PROVISIONS.
3. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
4. FLAGGING STATIONS SHALL BE ILLUMINATED PER SECTION 1-10.3(1)A OF THE STANDARD SPECIFICATIONS.
5. TYPE 3 BARRICADES SHALL BE INSTALLED PER STANDARD PLAN K-80.20.

NORTHBOUND I-5 DETOUR EXIT 68 /
US 12 FLAGGER CONTROL PLAN

NOT TO SCALE

FILE NAME										G:\444307\03-Design\Design\I-5\I-5 Koontz Road bridge repair\18 CAD\XL6514_PS_TC.dgn										FED.AID PROJ.NO. ER-2C02001-2		<div><div></div><div>Washington State Department of Transportation</div></div>		I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR TRAFFIC CONTROL PLAN		Plot 5	
TIME		11:13:52 AM								REGION NO.		STATE		10 WASH		PLAN REF NO											
DATE		11/28/2022														TC3											
PLOTTED BY		ecklunk														SHEET 31 OF 37 SHEETS											
DESIGNED BY		R. GEIST																									
ENTERED BY		R. GEIST																									
CHECKED BY		R. SMITH																									
PROJ. ENGR.		P. MASON										CONTRACT NO.		LOCATION NO.													
REGIONAL ADM.		C. FRANCIS																									
		REVISION		DATE		BY								DATE		P.E. STAMP BOX		DATE		P.E. STAMP BOX							

LEGEND

K

TEMPORARY SIGN LOCATION

□

TRAFFIC SAFETY CONE

🚧

FLAGGER STATION

JACKSON HWY

SR 508

SR 508

JACKSON HWY

NOTES:

1. THIS PLAN SHALL ONLY BE USED IN CONJUNCTION WITH TC1, TC2, TC3, AND TC4 DURING FULL CLOSURES OF NB 1-5.

2. THIS TRAFFIC CONTROL PLAN IS ONLY APPLICABLE TO THE TIMES LISTED IN 1-07.23(1) OF THE SPECIAL PROVISIONS.

3. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.

4. FLAGGING STATIONS SHALL BE ILLUMINATED PER SECTION 1-10.3(1)A OF THE STANDARD SPECIFICATIONS.

NORTHBOUND I-5 DETOUR JACKSON HWY /
SR 508 FLAGGER CONTROL PLAN
NOT TO SCALE

FILE NAMEG:\444307\03-Design\Design\I-5\I-5 Koontz Road bridge repair\18 CAD\XL6514_PS_TC.dgn				REGION NO. STATE		FED.AID PROJ.NO. ER-2C02001-2	DATE	P.E. STAMP BOX	DATE	P.E. STAMP BOX	<div><div><div></div></div><div>Washington State Department of Transportation</div></div>	I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR		Plot 7
TIME8:50:05 AM				10	WASH							TC5		PLAN REF NO
DATE11/22/2022												TRAFFIC CONTROL PLAN		SHEET 33 OF 37 SHEETS
PLOTTED BYgeistr				JOB NUMBER 22X344		LOCATION NO.								
DESIGNED BYR. GEIST				CONTRACT NO.										
ENTERED BYR. GEIST														
CHECKED BYR. SMITH														
PROJ. ENGR.P. MASON														
REGIONAL ADM.C. FRANCIS	REVISION	DATE	BY											

PCMS 1	
1	2
SLOW TRAFFIC AHEAD	NEXT # MILES
2.0 SEC	2.0 SEC

FIELD LOCATE AT LEAST 1/2 +/- MILE IN ADVANCE OF PCMS 2.

RELOCATE AS NEEDED TO REMAIN 1 +/- MILE IN ADVANCE OF QUEUE.

PCMS MAY BE TRUCK MOUNTED; IF SO, THE THREE TRANSVERSE DRUMS ARE OPTIONAL.

REMOVE WHEN QUEUE NO LONGER PRESENT.

= APPROXIMATE QUEUE LENGTH ROUNDED UP TO NEAREST MILE

LOCATE PCMS PER WSDOT STANDARD SPECIFICATION 1-10.3(3)C.

PCMS 2	
1	2
RIGHT LANE CLOSED	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1/4 +/- MILE IN ADVANCE OF W20-1 SIGN.

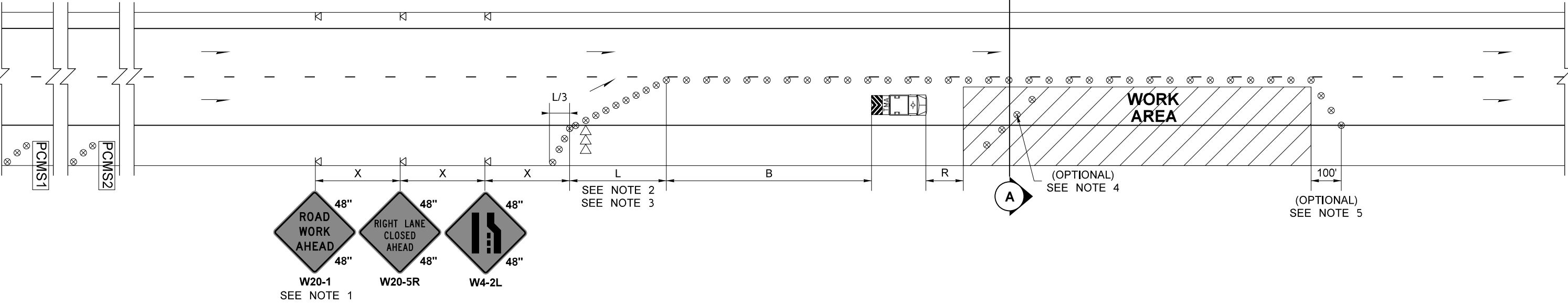
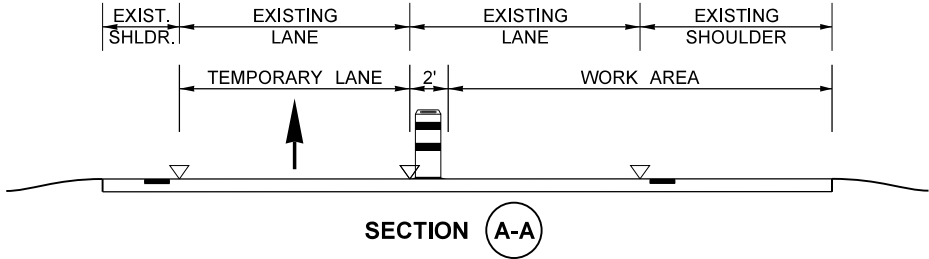
LOCATE PCMS PER WSDOT STANDARD SPECIFICATION 1-10.3(3)C.

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50-75	40	80

SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS 50-75 MPH 1500' +/-		
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS. (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		

MINIMUM LANE CLOSURE TAPER LENGTH = L							
LANE WIDTH (feet)	SPEED (MPH)	50	55	60	65	70	75
12	L (feet)	600	660	720	780	840	900
MINIMUM SHOULDER CLOSURE TAPER LENGTH = L/3							
SHOULDER WIDTH (feet)	SPEED (MPH)	50	55	60	65	70	75
6	L/3 (feet)	120	120	120	160	160	160
10	L/3 (feet)	200	200	200	240	240	280
USE A MINIMUM 3 DEVICES FOR SHOULDER LESS THAN 6'.							

MINIMUM LONGITUDINAL BUFFER SPACE = B						
SPEED (MPH)	50	55	60	65	70	75
LENGTH (feet)	425	495	570	645	730	820
STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R						
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.		HOST VEHICLE WEIGHT > 22,000 lbs.				
50-55 MPH	60+ MPH	50-55 MPH	60+ MPH	50-55 MPH	60+ MPH	50-55 MPH
123'	172'	100'	150'	123'	172'	100'



NOTES:

- CLASS A SIGN W20-1 CAN BE USED IN LIEU OF CLASS B SIGN W20-1 IF SIGN SPACING FOLLOWS THE APPROVED TRAFFIC CONTROL PLAN.
- DISTANCE BETWEEN LANE CLOSURE TAPER AND ALL OPEN RAMP SHALL BE 500' MINIMUM.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN LIMITS OF HORIZONTAL CURVES.
- PLACE TRANSVERSELY ACROSS CLOSURE AT A 45° ANGLE WITH 5' SPACING AT STRATEGIC LOCATIONS OR EVERY 1000' +/-.
- REOPENING TAPER OPTIONAL TO ALLOW FOR CONSTRUCTION VEHICLES TO ACCELERATE STRAIGHT OUT OF WORK AREA INTO THE RIGHT LANE.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- THIS TRAFFIC CONTROL PLAN IS ONLY APPLICABLE TO THE TIMES LISTED IN 1-07.23(1) OF THE SPECIAL PROVISIONS.

LEGEND

TEMPORARY SIGN LOCATION

TRAFFIC SAFETY DRUM

SEQUENTIAL ARROW SIGN

TRANSPORTABLE ATTENUATOR

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE WITH NO LANE SHIFTS
(EXISTING SPEED LIMIT MAINTAINED)
NOT TO SCALE

FILE NAME G:\444307\03-Design\Design\I-5\I-5 Koontz Road bridge repair\18 CAD\XL6514_PS_TC.dgn				REGION NO. STATE		FED.AID PROJ.NO. ER-2C02001-2		DATE		DATE		Washington State Department of Transportation		I-5 KOONTZ ROAD BRIDGE EMERGENCY BRIDGE REPAIR		Plot 8 PLAN REF NO TC6	
TIME 6:35:19 AM				10 WASH													
DATE 12/13/2022				JOB NUMBER 22X344													
PLOTTED BY geistr				CONTRACT NO.		LOCATION NO.											
DESIGNED BY R. GEIST																	
ENTERED BY R. GEIST																	
CHECKED BY R. SMITH																	
PROJ. ENGR. P. MASON																	
REGIONAL ADM. C. FRANCIS				REVISION		DATE		BY								SHEET 34 OF 37 SHEETS	

PCMS 1	
1	2
SLOW TRAFFIC AHEAD	NEXT # MILES
2.0 SEC	2.0 SEC

FIELD LOCATE AT LEAST 1/2 +/- MILE IN ADVANCE OF PCMS 2.

RELOCATE AS NEEDED TO REMAIN 1 +/- MILE IN ADVANCE OF QUEUE.

PCMS MAY BE TRUCK MOUNTED; IF SO, THE THREE TRANSVERSE DRUMS ARE OPTIONAL.

REMOVE WHEN QUEUE NO LONGER PRESENT.

= APPROXIMATE QUEUE LENGTH ROUNDED UP TO NEAREST MILE

LOCATE PCMS PER WSDOT STANDARD SPECIFICATION 1-10.3(3)C.

PCMS 2	
1	2
LEFT LANE CLOSED	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1/4 +/- MILE IN ADVANCE OF W20-1 SIGN.

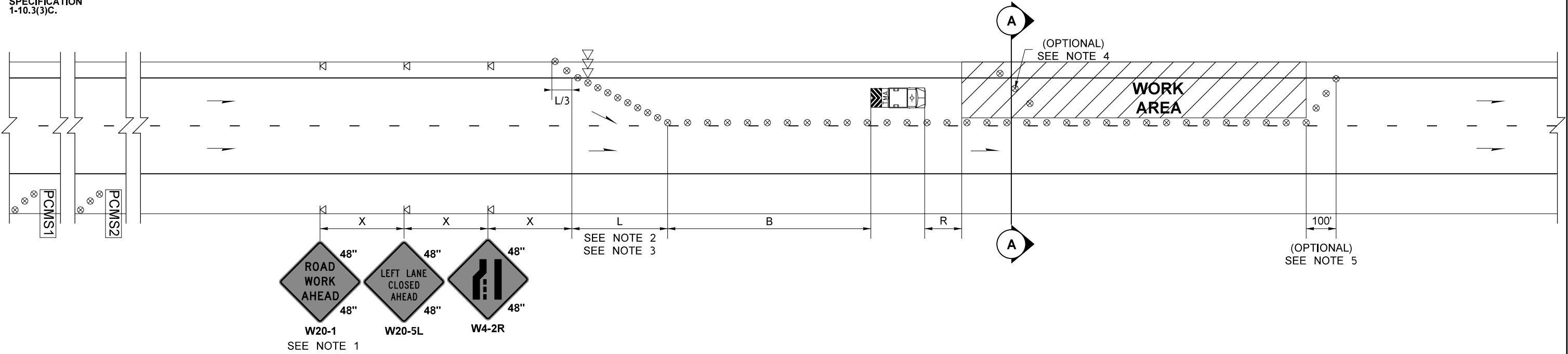
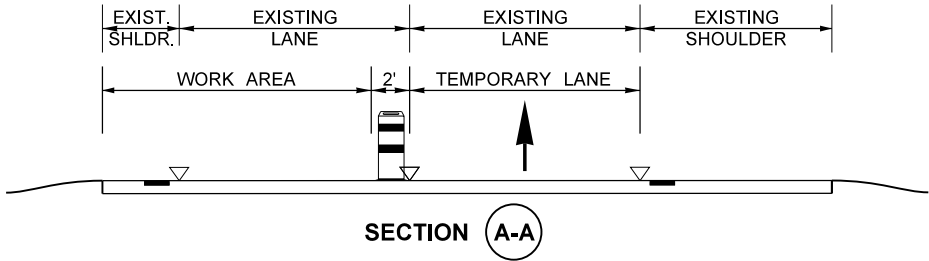
LOCATE PCMS PER WSDOT STANDARD SPECIFICATION 1-10.3(3)C.

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50-75	40	80

SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS		50-75 MPH 1500' +/-
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS. (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		

MINIMUM LANE CLOSURE TAPER LENGTH = L							
LANE WIDTH (feet)	SPEED (MPH)	50	55	60	65	70	75
12	L (feet)	600	660	720	780	840	900
MINIMUM SHOULDER CLOSURE TAPER LENGTH = L/3							
SHOULDER WIDTH (feet)	SPEED (MPH)	50	55	60	65	70	75
6	L/3 (feet)	120	120	120	160	160	160
10	L/3 (feet)	200	200	200	240	240	280
USE A MINIMUM 3 DEVICES FOR SHOULDER LESS THAN 6'.							

MINIMUM LONGITUDINAL BUFFER SPACE = B						
SPEED (MPH)	50	55	60	65	70	75
LENGTH (feet)	425	495	570	645	730	820
STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R						
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.		HOST VEHICLE WEIGHT > 22,000 lbs.				
50-55 MPH	60+ MPH	50-55 MPH	60+ MPH	50-55 MPH	60+ MPH	50-55 MPH
123'	172'	100'	150'	123'	172'	100'



NOTES:

1. CLASS A SIGN W20-1 CAN BE USED IN LIEU OF CLASS B SIGN W20-1 IF SIGN SPACING FOLLOWS THE APPROVED TRAFFIC CONTROL PLAN.
2. DISTANCE BETWEEN LANE CLOSURE TAPER AND ALL OPEN RAMPS SHALL BE 500' MINIMUM.
3. IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN LIMITS OF HORIZONTAL CURVES.
4. PLACE TRANSVERSELY ACROSS CLOSURE AT A 45° ANGLE WITH 5' SPACING AT STRATEGIC LOCATIONS OR EVERY 1000' +/-.
5. REOPENING TAPER OPTIONAL TO ALLOW FOR CONSTRUCTION VEHICLES TO ACCELERATE STRAIGHT OUT OF WORK AREA INTO THE RIGHT LANE.
6. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
7. THIS TRAFFIC CONTROL PLAN IS ONLY APPLICABLE TO THE TIMES LISTED IN 1-07.23(1) OF THE SPECIAL PROVISIONS.

LEGEND	
⏏	TEMPORARY SIGN LOCATION
⊗	TRAFFIC SAFETY DRUM
➡➡	SEQUENTIAL ARROW SIGN
	TRANSPORTABLE ATTENUATOR
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE WITH NO LANE SHIFTS
(EXISTING SPEED LIMIT MAINTAINED)
NOT TO SCALE

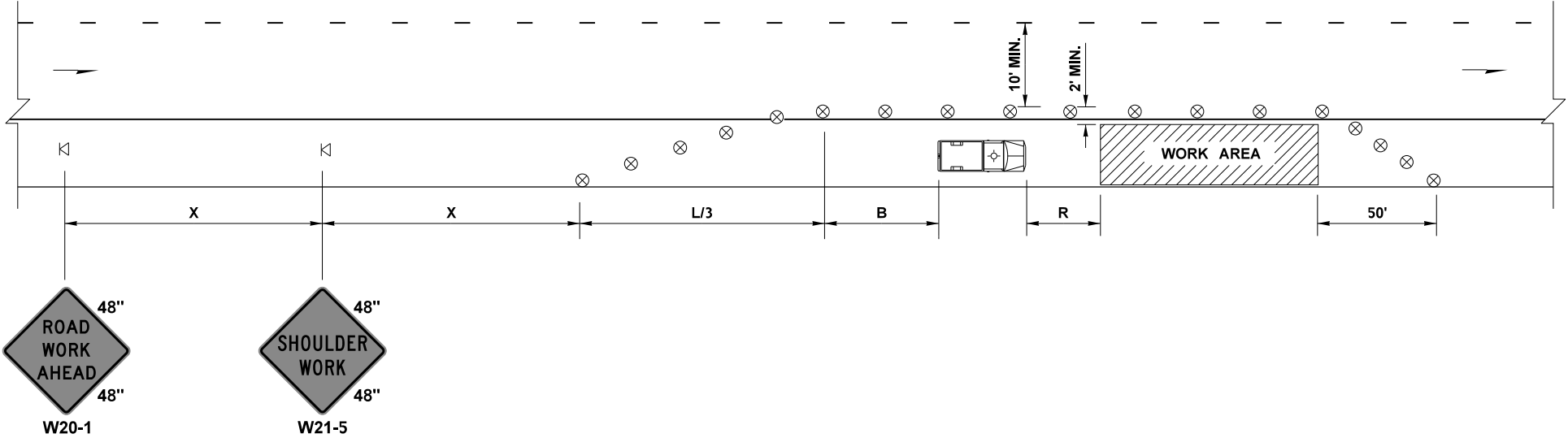
FILE NAME		G:\444307\03-Design\Design\I-5\I-5 Koontz Road bridge repair\18 CAD\XL6514_PS_TC.dgn		REGION NO.		STATE		FED.AID PROJ.NO.				Plot 9	
TIME		11:20:07 AM		10		WASH		ER-2C02001-2				PLAN REF NO	
DATE		11/28/2022										TC7	
PLOTTED BY		ecklunk										SHEET	
DESIGNED BY		R. GEIST										35	
ENTERED BY		R. GEIST										OF	
CHECKED BY		R. SMITH										37	
PROJ. ENGR.		P. MASON										SHEETS	
REGIONAL ADM.		C. FRANCIS										TRAFFIC CONTROL PLAN	
		REVISION		DATE		BY							

SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS. (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
	8'	40	40	60	90	-	-	-	-	-
10'	40	60	90	90	-	-	-	-	-	-
USE A 3 DEVICES TAPER FOR SHOULDERS LESS THEN 8'										

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.					HOST VEHICLE WEIGHT > 22,000 lbs.					
< 45 MPH	45-55 MPH		> 55 MPH		< 45 MPH	45-55 MPH		> 55 MPH		
100'	123'		172'		74'	100'		150'		
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
35/40	30	60
25/30	20	40



LEGEND	
⏏	TEMPORARY SIGN LOCATION
⊗	TRAFFIC SAFETY DRUM
	PROTECTIVE VEHICLE

SHOULDER CLOSURE - LOW SPEED
(40 MPH OR LESS)

NOT TO SCALE

NOTES

1. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20'(FT).
2. ALL SIGNS ARE BLACK ON ORANGE.

FILE NAME										G:\444307\03-Design\Design\I-5\I-5 Koontz Road bridge repair\18 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